

Appendix to Report from Select Committee - II

1832


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- An Account of the Company's Annual Investments of Raw Silk, provided in Bengal and imported into London, from 1814-15 to 1829-30, with its Cost Price in Rupees; specifying the several Charges thereon, and converting the Gross Amount into Sterling at the Mercantile Rates of Exchange at which Bills were drawn from Calcutta on London in each Year; also showing the Sale Proceeds in London, deducting all Charges, with a Statement of the Net Profit or Loss, and the Rate per Rupee realized in Sterling in each Year, as a Remittance to England. (Commons' Report, October 1831, Appx.)
- An Account of the Quantity of all Raw Silk supplied by the Agents in Bengal, and sold in India and in England, stating the Value thereof in each Year, from 1809-10 to 1830-31. (Commons' Report, October 1831, Appx.)
- An Account showing in Detail all the Items, and the Amount of each, forming the Invoice Price of the Company's Investment of Bengal Raw Silk, 1813-14 to 1829-30. (Commons' Report, October 1831, Appx.)
- A Statement of the Number and Valuation of Silk Filatures or Factories of the East-India Company in Bengal, at the last Valuation; distinguishing the Name of each, together with the Value of the same. (Commons' Report, October 1831, Appx.)
- An Account of the Remittances in Merchandise from India made in each Year from 1814-15 to 1829-30, with their Invoice Value, and the Charges incurred upon them, and the Sums they have actually realized at the Company's Sale. (Lords' Paper, 1830, No. 37.)
- An Account of the Quantity of Indigo purchased by the East-India Company in Bengal in each Year from 1814-15 to 1829-30, with its Cost Price in Rupees; specifying the Rate per Factory Mound, together with the several Charges thereon, and converting the Gross Amount into Sterling at the Mercantile Rates of Exchange at which Bills were drawn from Calcutta on London in each Year; also an Account of the Sale Proceeds of Indigo in London, deducting all Charges, with a Statement of the Net Profit or Loss, and the Rate per Rupee realized in Sterling in each Year as a Remittance to England. (Commons' Report, October 1831, Appx.)
- Statement of the Quantity and Cost in London of White List Cloth (Red) Exported to India in 1813-14, and to be Exported in 1828-29 by the East-India Company. (Commons' Paper, 1829, No. 285.)
- Statement of the Prices of British Calicoes, &c. in October 1813 and 1828. (Commons' Paper 1829, No. 285.)
- An Account of the Trade between the Eastern Islands and India, from 1814-15 to 1826-27. (Commons' Paper, 1829, No. 285.)
- An Account of the Trade between the Eastern Islands and India, 1827-28 and 1828-29. (Lords' Paper, 1831, No. 58 and Commons' Paper, 1831, No. 211.)
- Ditto .. ditto, 1829-30 and 1830-31. (Lords' Paper, 1830, No. 37.)
- An Account of the Quantity of Registered Tonnage employed by the East-India Company in their Trade to our Indian Possessions, from 1809-10 to 1827-28. (Commons' Paper, 1829, No. 285.)
- Ditto .. ditto, 1828-29 to 1830-31. (Lords' Paper, 1830, No. 67.)
- Accounts of the Quantity and Value of Cargoes Exported by American Ships from British India, 1815-16 to 1826-27. (Commons' Paper, 1829, No. 285.)
- Ditto .. ditto, 1827-28 and 1828-29. (Lords' Paper, 1831, No. 46; Commons' Minutes of Evidence, 1830-31.)
- An Account of the Quantity of American Tonnage which has cleared out from the different Ports of British India, from 1815-16 to 1826-27. (Commons' Paper, 1829, No. 285.)
- Ditto .. ditto, 1827-28 and 1828-29. (Lords' Paper, 1831, No. 46; Commons' Minutes of Evidence, 1830-31.)
- An Account of the American Trade to the British East-Indies, 1826 and 1827 (Enclosure in Letter from Mr. Luck, dated 12 December 1826). (Commons' Paper, 1829, No. 285.)
- Selections from Copies of Communications respecting the Coal Mines of India received at the India House from the different Presidencies. (Commons' Report, October 1831, Appx.)
- Copies or Extracts of all Despatches sent to India by the Court of Directors, since the passing of the Act 53 Geo. III., c. 155, as to the Interference of the Agents of the Company with Private Traders in respect of any Article of which both are Purchasers. (Commons' Report, October 1831, Appx.)
- Copies or Extracts of all Despatches sent to India by the Court of Directors since the passing of the Act 53 Geo. III., c. 155, relating to the Reduction of the Customs and Inland Duties in India, and the Proceedings had thereupon. (Commons' Report, October 1831, Appx.)
- Copies of Correspondence, dated in 1828 and 1829, relating to the Cultivation of Cotton and Tobacco in the East Indies. (Lords' Report, 1830, Appx. A; Lords' Paper, 1830, No. 57; and Commons' Report, China Trade, 1830, Appx.)
- Correspondence and Papers relating to the Character and Quantities of Cotton Wool. (Commons' Minutes of Evidence, 1830-31, &c.)

Extract Letters in the Revenue Department, dated in 1824 and 1826, and Copy Minute of Mr. Trower, and Resolution of Government of Bengal, respecting the Cultivation of Coffee in India,
(Lords' Report, 1830, Appx &c ; and Lords' Paper, 1830, No. 56.)

III—TRADE OF CHINA, EXCLUSIVELY—THE HEAD OF "TEA TRADE," EXCEPTED.

An Account of the Annual Value of the Trade between the Subjects of Great Britain and China, 1814-15 to 1827-28 (Commons' Paper, 1829, No. 285.)

Ditto ditto, 1827-28 to 1829-30,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 211.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

Accounts of all Imports and Exports between Great Britain and China, from 1811 to 1828, specifying the Quantity and Value of the principal Articles, and distinguishing the Trade of the East-India Company from the Privilege Trade, (Lords' Report, 1830, Appx. and Lords' Paper, 1830, No. 144.)

Ditto ditto, 1829 (Lords' Paper, 1831, No. 38.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

A Return of the Trade with China carried on by the East-India Company, and by Private Ships under the British Flag, for the Fifteen Years ending with 1827-28; distinguishing the principal Articles, and the Tonnage employed (Lords' Report, 1830, Appx.)

Ditto ditto, 1828-29 to 1830-31 ditto,
(Lords' Paper, 1831, No. 36; Ditto, 1832, No. 55.)

A Return of the Value of the Foreign Export and Import Trade of the Port of Canton, from 1813-14 to 1830-31; distinguishing the Trade carried on by each of the different Nations from that under the British Flag; and also the Trade carried on by the Company from that carried on by Private India Ships, with the Tonnage employed by each Nation in each Year for the same period,
(Lords' Papers, No. 124 of 1830, No. 36 of 1831, and 50 of 1832, and also Report of 1830, Appx. and Commons' Report, October 1831, Appx.)

An Account of the Quantity and Value of all Manufactures, exclusive of Woollens, Exported by the East-India Company and their Officers to China, in the Nineteen Years ending 30 April 1829,
(Commons' Paper, 1829, No. 285.)

Ditto ditto, in 1829-30,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

Account of the Invoice Value of the East India Company's Trade between China and England, from 1814-15 to 1827-28 (Commons' Paper, 1829, No. 285.)

Ditto ditto, 1828-29 and 1829-30,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

Account of the Quantity of British Manufactures annually Imported by the East-India Company into the Port of Canton, from 1809-10 to 1827-28; specifying particularly the quantities of Woollens and Cottons imported (Commons' Paper, 1829, No. 285.)

Ditto ditto, 1828-29 and 1829-30,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

Statement of the Quantity and Cost in London of Woollens Exported to China in 1813-14, and to be Exported in 1828-29 (Commons' Paper, 1829, No. 285.)

An Account of the Quantity of Woollens Exported by the East-India Company to China, from 1810 to 1829 (Commons' Paper, 1829, No. 285.)

Ditto ditto, 1829-30,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

- An Account of Goods Exported by the Court of Directors from England to Canton, from 1822-23 to 1828-29, and a Statement of the Gain or Loss on the Sales of the Company's Exports in each Year ..
(Lords' Report, 1830, Appx.; and Lords' Paper, 1830, No. 141.)
- Ditto ditto, 1829-30 (Lords' Paper, 1831, No. 38.)
- Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)
- An Account of Long Ells, Broad Cloth, and Camlets, demanded from and Exported to China, from 1811-12 to 1829-30 (Lords' Paper, 1830, No. 98.)
- An Account of Lead and Tin, ditto ditto, from 1811-12 to 1829-30, (Lords' Paper, 1830, No. 98.)
- An Account of Sundry Articles of British Manufacture and Produce which have been Exported to China upon Experiment, not having been demanded by Indent, from 1811 to 1829,
(Lords' Paper, 1830, No. 98.)
- An Account showing the Amount of the Cargoes (and of what consisting) consigned from the Factory at Canton to England, likewise the Amount of all Payments for which England is debited, from 1822-23 to 1828-29 (Lords' Paper, 1830, No. 139; and Lords' Report, 1830, Appx.)
- Ditto ditto, 1829-30 (Lords' Paper, 1831, No. 38.)
- Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)
- An Account of the Prime Cost and Quantity of Raw Silk Exported from Canton by the East-India Company, from 1809-10 to 1827-28 (Commons' Papers, 1829, No. 255.)
- Ditto ditto, 1828-29 and 1829-30,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)
- Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)
- An Account of the Registered Tonnage employed by the East-India Company in their Trade to China, from 1809-10 to 1827-28 (Commons' Paper, 1829, No. 255.)
- Ditto ditto, 1828-29 to 1830-31 (Lords' Paper, 1832, No. 37.)
- An Account of the Quantity of Registered Tonnage belonging to the East-India Company clearing out annually from Canton for England, 1810 to 1828 (Commons' Paper, 1829, No. 255.)
- Ditto ditto, 1829 to 1831 (Lords' Paper, 1832, No. 37.)
- An Account of all Sums paid for Freight, Demorage, &c. on Ships employed by the East-India Company in the China Trade, from 1822 to 1828 (Lords' Report, 1830, Appx., and Lords' Paper, 1830, No. 67.)
- Ditto ditto, 1829 and 1830 (Lords' Paper, 1832, No. 37.)
- An Account of the Rate of Freight per Ton paid by the East India Company from China on the Tonnage of the whole Tonnage, from 1824 to 1829,
(Lords' Report, 1830, Appx., Lords' Paper, 1830, No. 43; and Commons' Report, China Trade, 1830, Appx.)
- Ditto ditto, from 1824 to 1830 (Lords' Paper, 1832, No. 37.)
- Ditto, which will probably be paid on ditto, of the Years 1830 to 1834,
(Commons' Report, China Trade, 1830, Appx.)
- An Account of the Charges imposed by the Chinese Government on Ships in the Company's Service entering the Port of Canton, from 1814-15 to 1827-28 (Commons' Paper, 1829, No. 255.)
- An Account of the Charges incurred by the East-India Company on their Shipping at Canton, including the Measurement of Ships, &c. from 1822-23 to 1828-29,
(Lords' Report, 1830, Appx.; and Lords' Paper, 1830, No. 67.)
- Ditto ditto, 1829-30 and 1830-31 (Lords' Paper, 1832, No. 37.)
- Statement of the Manner in which the Freight and Charges on Ships proceeding to China via Bengal, Madras, and Bombay are apportioned on the Outward and Homeward Voyages,
(Commons' Report, China Trade, 1830, Appx.)
- An Account of the Losses sustained by the East-India Company in the China Trade, from 1822-23 to 1828-29, by Perils of the Sea, &c., (Lords' Report, 1830, Appx.; and Lords' Paper, 1830, No. 142.)
- Ditto ditto, 1829-30 (Lords' Paper, 1831, No. 38.)
- Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)
- A Statement of the Company's Establishment of Supracargoes, &c. at Canton, specifying the Rank of each, their respective Salaries, and all other Charges of the Establishment; likewise the Commission paid to each on the European or China Sales of Goods, from 1822-23 to 1828-29,
(Lords' Report, 1830, Appx.; Commons' Report, China Trade, 1830, Appx.)

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A Statement of the Company's Establishment of Supracargoes, &c at Canton, specifying the Rank of each, their respective Salaries, and all other Charges of the Establishment; likewise the Commission paid to each on the European or China Sales of Goods, from 1823-24 to 1828-29, (Lords' Paper, 1830, No. 45.)

Ditto .. ditto, 1829-30,
(Lords' Paper, 1831, No. 38 (Statements 41 and 43), and Commons' Minutes of Evidence, 1830-31.)

Ditto .. ditto, 1830-31, (Lords' Paper, 1832, No. 37 (Statements, Nos. 41 and 43.)

An Account showing all other Charges, as well in China as in England, incurred by the East-India Company in their Trade with China, including Freight, and stating the Actual Amount in each Year, from 1823-24 to 1828-29, (Lords' Report, 1830, Appx., and Commons' Report, China Trade, 1830, Appx.)

Ditto .. ditto, 1829-30,
(Lords' Paper, 1831, No. 38; and Commons' Minutes of Evidence, 1830-31.)

Ditto .. ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

An Account of the actual Cost of all the Company's Buildings in China up to the latest Date, also a Statement of the Sums expended in Repairs, Rent, Taxes, or otherwise, from 1822-23 to 1828-29,
(Lords' Paper, 1830, No. 143.)

Ditto .. ditto, 1829-30 (Lords' Paper, 1831, No. 38.)

Ditto .. ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

An Account of the Value of Imports into and Exports from Canton by the Americans, from 1814-15 to 1826-27,
(Commons' Paper, 1829, No. 285.)

Ditto .. ditto, 1827-28 and 1828-29,
(Lords' Paper, 1831, No. 38, and Commons' Paper, 1831, No. 211.)

Ditto .. ditto, 1829-30 (Lords' Paper, 1832, No. 37.)

An Account of the Trade from the United States to China in 1826 and 1827,

(Commons' Paper, 1829, No. 285.)

An Account of the Exports from Canton by the Americans, intended for American Consumption, from 1815-16 to 1826-27,
(Commons' Paper, 1829, No. 286.)

Ditto .. ditto, 1827-28 and 1828-29,
(Lords' Paper, 1831, No. 38, and Commons' Paper, 1831, No. 211.)

Ditto .. ditto, 1829-30 (Lords' Paper, 1832, No. 37.)

An Account of the Exports from Canton by the Americans, intended for European Consumption, from 1815-16 to 1826-27,
(Commons' Paper, 1829, No. 285.)

Ditto .. ditto, 1827-28 and 1828-29,
(Lords' Paper, 1831, No. 38, and Commons' Paper, 1831, No. 211.)

Ditto .. ditto, 1829-30 (Lords' Paper, 1832, No. 37.)

Statement of the Number of Ships imported into China by the Americans, from 1814-15 to 1826-27,

(Commons' Paper, 1829, No. 286.)

Ditto .. ditto, 1827-28 and 1828-29,
(Lords' Paper, 1831, No. 38, and Commons' Paper, 1831, No. 211.)

Ditto .. ditto, 1829-30 (Lords' Paper, 1832, No. 37.)

Quantities and Value of British Manufactures Imported into China by the Americans from 1824-25 to 1826-27; and also the Amount Imported by the East India Company and their Officers in the same Year,
(Commons' Paper, 1829, No. 286.)

Ditto .. ditto, 1827-28 and 1828-29,
(Lords' Paper, 1831, No. 38, and Commons' Paper, 1831, No. 168.)

Ditto .. ditto, 1829-30 (Lords' Paper, 1832, No. 37.)

A Return of the Green Trade with China carried on by the Americans; distinguishing the principal Article of Export and Import; also the Tonnage employed, from 1813-14 to 1827-28,

(Lords' Paper, 1830, No. 121, and Lords' Report, 1830, Appx.)

Ditto .. ditto, 1828-29 (Lords' Paper, 1831, No. 36.)

Ditto .. ditto, 1829-30 (Lords' Paper, 1832, No. 35.)

An Account showing the Amount of all Bills of Exchange drawn upon the Court of Directors by the Supracargoes at Canton from 1822-23 to 1828-29 in Piles converted into Sterling Money at the Rate of 6s 8d per Pile, compared with the Amount of the Payment of the said Bills in Sterling Money,
(Lords' Report, 1830, Appx., and Lords' Paper, 1830, No. 140.)

Ditto .. ditto, 1829-30, (Lords' Paper, 1831, No. 38.)

Ditto .. ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

A Return of the Rates of Exchange and Sights at which the Select Committee at Canton have drawn Bills on the Court of Directors in England; distinguishing the Rate at which the Canton Treasury was opened generally from the Rates at which the Commanders and Officers of the Company's Ships were supplied with Bills, conformably to the Charter-party Agreements, from 1814-15 to 1828-29, with the Amount of the Bills in each Year (Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1829-30 (Commons' Minutes of Evidence, 1830-31)

A Return of the Rates of Exchange and Sights at which the Select Committee at Canton have drawn Bills on the several Presidencies in India, and the Amount, in each Year from 1814-15 to 1828-29, (Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1829-30 (Commons' Minutes of Evidence, 1830-31)

An Account showing the Amount of all Supplies from England to the Factory at Canton, from 1822-23 to 1828-29 (Lords' Paper, 1830, No. 139; and Lords' Report, 1830, Appx.)

Ditto ditto, 1829-30 (Lords' Paper, 1831, No. 28)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37)

IV.—TEA TRADE, &c

An Account of the Prime Cost and Quantity of Tea Exported from Canton by the East-India Company from 1809-10 to 1827-28 (Commons' Paper, 1829, No. 285.)

Ditto ditto, 1828-29 and 1829-30, (Lords' Paper, 1831, No. 38, and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

An Account of the Quantity of Tea Exported by the East-India Company from Canton, specifying the several kinds of Tea, and the average Prime Cost per Pound, from 1822-23 to 1828-29, (Lords' Report, 1830, Appx., Lords' Paper, 1830, No. 44; and Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1829-30, (Lords' Paper, 1831, No. 38, and Commons' Minutes of Evidence, 1830-31)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

An Account of the Quantity and Sale Amount of Tea sold by the East-India Company, from 1810-11 to 1828-29 (Commons' Paper, 1829, No. 285.)

Ditto ditto, 1828-29 and 1829-30, (Lords' Paper, 1831, No. 38, and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

A Return of the Quantities and Prices of the several Sorts of Tea sold by the East-India Company, from 1811-12 to 1828-29 (Papers of February 1830.)

Ditto ditto, 1829-30, (Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

A Statement showing the Average Sale Price per Pound of all Teas sold by the East-India Company, from 1814-15 to 1828-29 (Papers of February 1830.)

Ditto ditto, 1829-30 (Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1821 to 1830 (Commons' Report, October 1831, Appx.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

An Account of the Quantity of Tea put up to Sale in the Years 1826-27, 1828-29, 1830-31, and 1831-32, and the Quantity refused by the Buyers of the private Trade of the Commanders and Officers, (Commons' Paper, 1830, No. 285.)

Ditto ditto, 1829 and 1830 ditto, (Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1831 ditto, (Lords' Paper, 1832, No. 37.)

Quantities and Value of Teas sold in each Year from 1811 to 1829, (Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1st May 1830 (Commons' Minutes of Evidence, 1830-31)

Ditto ditto, 11th June 1830 (Commons' Report, China Trade, 1830, Appx.)

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An Account of the several Sales of the East-India Company from 1822-23 to 1829-30; specifying the Quantity of each kind of Tea sold, the average Price at which each kind was put up, and at which each kind was sold at each Sale.

(Lords' Report, 1830, Appx.; Lords' Paper, 1830, No. 48; and Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1830,
(Lords' Paper, 1831, No. 38; and Commons' Minutes of Evidence, 1830-31.)

Ditto ditto, 1831 (Lords' Paper, 1832, No. 37.)

A Return of the Average Time the whole Quantity of Tea sold at each Quarterly Sale had been in the Company's Warehouse prior to such Tea being put up to Sale, for the Years 1827 to 1829,
(Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1830 (Commons' Minutes of Evidence, 1830-31.)

Statements of the Probable Freight and Demorage per Pound on Teas to be imported in the Years 1830 to 1834 (Commons' Report, China Trade, 1830, Appx.)

Statement of the actual Expenditure of the East-India Company in their Tea Trade, from Wastage and Allowance, from 1814-15 to 1829-30 (Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1829-30 (Commons' Minutes of Evidence, 1830-31.)

Account of the Profit and Loss on the East-India Company's Tea Trade with China, for 1828-29; stating the Prime Cost, how calculated, the Freight and Demorage, the Charges incurred in Landing, &c. &c., the Interest and Insurance, as calculated to make the Upset Price; the Supra cargoes' Commission, and all other Charges incurred either in England or China
(Commons' Report, China Trade, 1830, Appx.)

Ditto ditto, 1829-30 (Commons' Minutes of Evidence, 1830.)

Total Amount of Tea Duty collected by the East-India Company, and paid over to His Majesty's Government, from 1814-15 to 1829-30 (Commons' Report, China Trade, 1830, Appx.)

A Return of the Establishment of the Excise for collecting the Revenue on the Imports of Tea in London, stating in Detail the several Branches, and their Expense in 1829,
(Commons' Report, China Trade, 1830, Appx.)

Return to an Order for a Copy of the Accounts and Estimates presented by the East-India Company to the Treasury for the last Five Years, specifying the Orders of Importation, Price of Sale, &c., of Tea,
(Commons' Report, China Trade, 1830, Appx.)

An Account of the Quantity and Value of Teas sold by the East-India Company at the Cape of Good Hope, from 1813-14 to 1827-28; also showing the Rate of Colonial Duty payable thereon,
(Commons' Paper, 1829, No. 285.)

Ditto ditto, 1828-29 and 1829-30, ditto,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

Instructions to the Agent at the Cape relative to the putting-up Price of Teas,
(Commons' Report, China Trade, 1830, Appx.)

An Account of the Quantity and Value of Teas sold by the East-India Company at Quebec and Montreal, 1825-26 to 1827-28, with the Rate of Colonial Duty payable thereon, (Commons' Paper, 1829, No. 285.)

Ditto ditto, 1828-29 and 1829-30, ditto,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

An Account of the Quantity and Value of Teas sold by the East-India Company at Halifax, in the Years 1826-27 and 1827-28, with the Rate of Colonial Duty payable thereupon,
(Commons' Paper, 1829, No. 285.)

Ditto ditto, 1828-29 and 1829-30, ditto,
(Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)

Ditto ditto, 1830-31 (Lords' Paper, 1832, No. 37.)

An Account of the Quantity of Tea Exported from Great Britain to Foreign Europe, to British Colonies and Possessions, and to all other Parts, from 1814 to 1829, (Papers of February 1830.)

Ditto ditto, in the Year ending 5 January 1830,
(Lords' Paper, 1831, No. 45; and Commons' Paper, 1831, No. 217.)

Ditto ditto, 5 January 1831 (Lords' Paper, 1832, No. 32.)

- Copy Correspondence, &c. between the Board of Control and the Court of Directors, in 1824, regarding a Memorial presented to the Lords of the Treasury from certain Tea Dealers of the City of Edinburgh, (Commons' Report, China Trade, 1830, Appx.)
- Copy of Letters of the Chinese Government against the Exportation of Tea from any Port or Ports of China, (Commons' Report, China Trade, 1830, Appx.)
- Memorial from the Bombay Merchants as to the Suspension of the Intercourse with China, May 1815, (Commons' Report, China Trade, 1830, Appx.)
- Copies of Correspondence and Papers, dated 1823 and 1829, relative to the Interruption of the East-India Company's Trade at Canton, (Commons' Report, China Trade, 1830, Appx.)
- Ditto ditto, relative to the Suspension of ditto, 1829-30, (Commons' Report, October 1831, Appx.)
- Copies of Papers relating to the alleged Breach of the Laws of China, (Commons' Report, October 1831, Appx.)
- Ditto ditto, relating to the Death of Mr. Mackenzie at Canton, (Commons' Report, October 1831, Appx.)
- Ditto ditto, relating to an Armed Force for the protection of the Company's Factory at Canton, (Commons' Report, October 1831, Appx.)
- Ditto ditto, relating to Orders for Ships moving down the River to return the Fire of the Forts, &c. of the Chinese, (Commons' Report, October 1831, Appx.)
- Ditto ditto relating to the Redress of Grievances, or the Acquisition or Assertion of Privileges, (Commons' Report, October 1831, Appx.)
- Ditto ditto, relating to the Aggression committed by the Chinese Authorities on the Factory at Canton, (Lords' Paper, 1832, No. 22)
- Proclamation of the Chinese Government concerning the Trade carried on by Shopmen, dated 14 July 1828, (Lords' Paper, 1830, No. 102.)
- A List of Hong Merchants, stating the particular Privileges and Powers with which they are invested in respect to the Canton Trade, (Lords' Paper, 1830, No. 102.)
- Rates of Duty payable upon Teas imported into New York, (Commons' Paper, 1829, No. 285.)
- Ditto ditto, (Lords' Paper, 1831, No. 38; and Commons' Paper, 1831, No. 168.)
- Ditto ditto, (Lords' Paper, 1832, No. 37.)
- Rates of Duty on Teas as imposed by the American Tariff of 1824, (Enclosure in Letter from Mr. Lack, dated 12 December 1828) (Commons' Paper, 1829, No. 285.)
- An Account of the Quantity of Tea Imported into, and Exported from the United States in 1826 and 1827, (Enclosure in ditto) (Commons' Paper, 1829, No. 285.)
- Copies of Letters and Statements received from His Majesty's Consuls Abroad relative to the Duties on, and the Price and Consumption of Tea in Foreign Countries, (Commons' Paper, 1830, No. 285; Lords' Report, 1830, Appx.; Commons' Report, on China Trade, 1830, Appx.; and Papers of February 1830.)
- Copies of Correspondence and Papers relating to the Samples of Teas procured from Foreign Countries by His Majesty's Consuls, (Lords' Evidence, Appx.; Commons' Report, China Trade, 1830, Appx.)

COMMERCIAL.

APPENDIX, No. 1.

DIGEST OF EVIDENCE given before the LORDS' COMMITTEE, 1830, on
COMMERCIAL Subjects.

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Indigo.

THE cultivation of indigo has been very beneficial to the interests of the inhabitants of the district of Tirhoot. It is impossible to look at the district without been struck with its high state of cultivation and the quantity of forest land which has been brought under the plough. This improved cultivation is the effect of the funds received from the indigo planters, who have raised indigo on the ground which had been previously given up to corn: it has certainly contributed to the wealth of the country. The condition of the ryots who labour for European indigo planters, is worse than that of other ryots. There is no difference observable between them. The indigo cultivators are rather better off. There is not in the districts where indigo is grown an increased consumption of British goods. The situation of the ryots has become worse since the great competition took place. The cultivation of indigo has considerably benefited the country; the zemindars are becoming wealthy, and the ryots are improved in condition, and possess more comforts than where that cultivation does not exist. The general conduct of indigo planters is very good. The improvement in the condition of the ryot depends much on the conduct of the planter: the latter is seldom guilty of oppression, as it is very contrary to his interest; though instances no doubt have occurred. Europeans have not been oppressive superiors. Ryots under Europeans are more favourably situated than others. The villages increase much in value. The natives are in a better condition where indigo is cultivated, and their land is better filled. The possession of lands legally would enable the planter to do more than he did indirectly, and by the indirect holding they were much improved. Before the indigo planters had permission to hold lands in their own names, they obtained them by farming the different zemindaries in the names of their servants, whence arose various oppressions of the natives towards the natives: they compelled them to sow a larger portion of land with indigo than they would otherwise have been inclined to do, and they took their best lands. Large farms were frequently taken in the names of servants, at great risk of loss. A lease from a zemindar places a planter in the shoes of the zemindar; the planter pays rent to the zemindar, and receives rent from the ryots. The advantage of the lease is to keep other Europeans off, and to induce the ryot, through good will, to cultivate more land with the indigo. The lease gives no power of di-

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II. FINANCE.
Commercial

Robertson.

Ramsay.

Davidson.

Ramsay.

Rickards.

Harris.

Hodgson.

Harris.

do.

do.

Ramsay.

Harris.

do.

and Davidson.

Dunlop,

and Davidson.

Harris,
and Davidson.
do.

Ramsay.
Harris.

do.
Davidson.

Harris.
Davidson.

do.
do.
Ramsay.

Davidson.
Harris.
Davidson.
do.

Ramsay.
Davidson,
and Ramsay.
Davidson.
Ramsay.
do.

Harris.
do.
Davidson.

do.
do.
do.

Crawford

Hodgson.
Ramsay.
Baber.
Dunlop.

Harris.
Robertson.
Harris.

Ramsay.

recting the cultivation, but there is no difficulty in inducing the ryots to cultivate indigo. There is a great disposition on the part of the ryots to engage in it. It is reported that ryots have been forced to cultivate indigo, but it is not a general practice. The ryot has by law a power to cultivate his land as he pleases. The ryot has generally a right to cultivate the land as he likes, and the planter interferes with that right. The zemindars would seldom give a lease for more than three years. A lease for twenty-one years would be sufficient to enable the European speculator to derive the full benefit of the employment of his capital. Greater interest in the land than is gained by making advances to the ryots, is often wanted. The power of holding lands is very essential to the cultivation of indigo. Indirectly, the defective administration of justice has an effect upon the production, as has also the want of free permission to Europeans to settle and colonize. If Europeans generally were enabled to hold leases, the production of indigo would not be much increased, as almost all the lands fit for it are now in cultivation. It is not essential to the interests of the manufacturer that he should raise the articles which he manufactures; if he could do it through the ryots, it would be unnecessary for him to raise the article, but often he cannot. A very small portion of the indigo grounds are cultivated by Europeans on lease; the greater parts by ryots contracting to furnish the produce; the most profitable cultivation is through the ryots. The permission to hold land would be an advantage, but the extension of the cultivation must depend on the price; a long term of years would not be so good as a perpetuity. In almost all cases the planters make advances to the cultivators, who agree to deliver so much weed at certain prices; the advance was two rupees a bega for cultivation, and one for seed and weeding. The better the ground is dressed, the better is the produce of the indigo; it requires good culture, but no particular skill. The crop is very uncertain; the native is put to great expense in cultivating it, and it often yields nothing; then the planter who has made the advances may be very oppressive. The ryot has no other remedy against oppression than an appeal to the courts, where he has very little chance of having his appeal heard. Oppression is principally exercised in the lower parts of Bengal, where a number of low Europeans and ~~Mahomedans~~ are settled. The advances made to the ryots induce them to cultivate indigo; ~~the advances~~ are frequently lost. Europeans have a difficulty in enforcing their agreements; they can only do it by applying to the courts. The ryots frequently make agreements with more than one planter, which leads to great violence and oppression; in cutting the weed, to which both parties conceive themselves entitled, dreadful affrays occur. The disputes are often occasioned by questions respecting boundaries, as the rivers throw up lands which two parties claim, and they enlist Europeans on their side by selling the disputed lands to them. Very few difficulties were experienced with the ryots; in general they acted as conscientiously as most people in their situation would do; as farmers in England would. There have been a few instances of their letting lands to more than one person. Mr. Harris had no occasion to have recourse to a court of justice against either zemindars or ryots. It would not be practicable to carry on the cultivation of indigo under the present disabilities, if any other country were discovered producing it with greater natural advantages. The greater price of indigo in India, as compared with that obtained in England, has arisen from the necessity of making remittances, and from the competition of the East-India Company. These have produced an over-supply in Europe, which depresses the market. Europeans have been most successful in indigo; the quality and quantity have been much improved; that is, the manufacture has been improved, not the weed itself. The cultivation of indigo has improved, which is attributable to a free application of European skill and capital, and to that only. The introduction of indigo at Tinnivelly was a successful speculation. The manufacture of indigo has greatly improved within the last twenty years. It is not so profitable a speculation as when indigo was cheaper, owing to the great competition. Europeans engaged in the cultivation of indigo have not found the speculation answer their expectations. Upon the whole it has been a profitable speculation to those engaged in it. Indigo was an advantageous employment of capital and land; in its manufacture expensive establishments are required, but not much machinery. The buildings form but a small part of the outlay; the principal expense is in the advances and the labour, the advances being from one-third to one-half of the whole. Some natives have considerable factories, but the indigo

is not so good as the manufactured by Europeans. The natives do not engage in the manufacture so Europeans do, but many do engage. They employ both European and Native assistants. The manufacture of them is interesting. They manufacture the article in the same way as Europeans, but not with so much attention, though with more than they formerly did. The Natives pay more regard to cotton than to indigo. Many indigo planters employ European assistants. "I had a great dislike to employing them," for the natives were always fully sufficient, and always trustworthy, and the more confidence there was placed in them the more deserving they were of it. The native labourers must be strictly looked after and kept to their work. They do not get through so much work as American slaves. There are from 500 to 1,000 Europeans engaged as indigo manufacturers. Those who take lands for the cultivation of indigo generally employ them. In some cases the agents in Calcutta have shares in the factories, but in others they are generally established by capital not brought from England, but borrowed in Calcutta, at a high rate of interest, and belonging to natives and to the agency houses, and some part of it being the savings of the Company's servants. The agency houses have no security unless it be on the buildings; they make the planter insure his life. The factors may be considered as the servants of the Calcutta agents. The indigo planters return home whenever they can. There are many respectable men among them, but not many men of capital. There is no instance known of a man with capital going out to India to establish an indigo plantation.

Cotton.

INDIAN cotton is usually at two-thirds the price of American of the same staple; it is shorter stapled than the short-stapled American; it has more dirt, and there is more waste in the manufacture of it. It is generally used in making low goods, or mixed with other wools to reduce the price; it is much more used abroad. It is inferior from the use of the native seed, and from its dirty state; it is short in the staple, so as to require peculiar machinery, of coarser quality, and extremely dirty. Surat cotton is considered the best; but the fine Dacca muslin, which is not equalled in England, is made in Bengal. The best Surat cotton is nearly as good in quality as Georgia, but it is forty per cent. worse in price, from the American being better grown and cleaner. Very clean Indian cotton would approach very nearly to the price of American; it would fetch six-sevenths of that price. The loss in cleaning is about ten per cent. in weight, and the expense is trifling. It would answer better to purchase the uncleared cotton at 3d. per pound than the cleaned at 6d.; and spinners prefer having the cleaning of it themselves. If imported in its dirtiest state, it would be very difficult to clean it. Packing does not injure it. In England there is machinery for cleaning cotton superior to the American. The effect of machinery is to hurt the cotton; it is better cleaned by hand. American cotton has much improved of late years by the constant change of seed, and by the superior method of cleaning, on which the value much depends. The Indian seed has not been changed. In the last two years the Indian cotton has been worse. There has been no improvement in Indian cotton; it is as good as it used to be, and some of it is better cleaned. It is very possible to improve the growth of cotton in India. By improved cultivation and selection of seed, Bombay cotton might be grown as good as Sea Island. The finer the cotton is the more care is required in the cultivation. There should be more attention in selecting seed, in growing, and above all, in cleaning, packing, and preparing for market. All the cotton is spun by hand in India. More attention is paid by the natives to cotton than to indigo. The cultivation of cotton might be extended by a greater application of capital. In cotton and other articles, attempts to introduce an alteration in the culture have hitherto failed, with the single exception of the cultivation of Bourbon cotton in Tinnevely; there, owing to favourable circumstances of soil and climate, a considerable extent of ground is cultivated with superior seed from the Isle of France but the climate has opposed the extension of the cultivation of that article. No sanguine hopes can be entertained of a large increase of the cultivation of cotton, for the land is pre-occupied with other articles of export, and with the necessary food for a dense population; besides, America has such great natural advantages in the production of cotton; but the experiment could not be fairly tried till there was the power of holding lands, and free egress, and

Dunlop.
do.
Dunlop.
Harris.

Dunlop.

Davidson.
Ramsay,
and Davidson.
Chaplin.
Dunlop.
Harris.
Davidson.
Harris.
Dunlop.
Ramsay.

Ryder,
and Burdcock.
Ryder.
Burdcock.
Crawford.
do.
Davidson.
Crawford.
Ryder.

Burdcock.
do.
Ryder.
Burdcock.
Carruthers.
Burdcock.
do.
Ryder.
Crawford.
Burdcock.
Ryder.
Burdcock.
Crawford.
do.
Dunlop.
Elphinstone.
Hodgson.

Davidson.

do.

Crawford.

do.
do.
do.

Magniac.

every thing belonging to an unrestricted commerce. Cotton cannot be grown by Europeans as indigo now is, because it requires more machinery and permanent buildings, and the investment of fixed capital would be greater. No long-stapled cotton has been cultivated in India; no skill or capital has been applied to it, the natives do not require it for their own manufactures, and it has not been wanted for exportation. Long-stapled fine cotton is only grown near the sea. The only way to improve the cotton of India is to allow a free admission of European residents and capital; no good cotton can be produced without it. When skill and capital are invested in the soil and industry of India, machinery, and whatever may be requisite, will be applied naturally; but the interference of Government with a view to the improvement of the cultivation is of no benefit whatever. The price of raw cotton in China has declined much of late years; the quality of a portion of it was formerly of a superior description; that now probably finds its way to Europe. The superior kinds were better cleaned, as they could afford the expense; the inferior were not so well cleaned.

Silk.

Ramsay.
Chaplin.
Larkins.

Ramsay.

do.
do.
do.
do.

Chaplin.

Larkins.

Ramsay.

do.
do.
do.

do

do.

Chaplin
Elphinstone.
Davidson
Paber

Ramsay
Paber
do
Ramsay

The silkworm is principally confined to Bengal Proper, with the exception of the eastern districts. It will not flourish in the Upper Provinces. Silk is very little cultivated under the Bombay presidency, the soil not being suited to the mulberry. The Company's investment for England is provided by the agency of their commercial residents; and the silk is obtained by contract with the men who rear the cocoons, to whom considerable advances are made. The cultivators are not a poor class of people. The Company have extensive manufactories, but under no other superintendence than that of their own residents; and they do not carry the manufacture beyond reeling. They have about twelve residencies. At one or two of them piece-goods are manufactured; in the other factories the silk is only wound from the cocoons, and sent to Europe in a raw state. The piece-goods are made from Putney silk; that is, silk wound by the natives at their own houses. Want of capital on the part of the natives prevents the increase of the winding at their own houses. They have not money to buy the machinery. Many natives employed in the silk trade have large capital. The mulberry-trees and the worms in general belong to different people. Sometimes the growers are paid so much for the cocoons; sometimes so much for the silk reeled from them. The manufacture of the finer silks, called kincohs, has much diminished. English silks are imported to a considerable extent. The silk manufactures of Boorham-poor and Mongapytun have much diminished. Great endeavours have been made by the Company to improve the quality of their silk. They employed for many years a very intelligent man who was well acquainted with the manner in which silk is made in Italy, and who introduced Italian filatures into Bengal. The Italian worm is only reared at a few factories; it spins stronger silk than the Indian. There are four harvests of silk from the latter; in November, January, March, and June, of which November and January are the principal; from the Italian there is only one. The produce of the Italian worm has fallen off in quality and quantity. Several European residents have factories of the same description, but not on so large a scale as the Company's. The prices which the Company give, command the market, they are so high, that no private merchant can purchase with a prospect of advantage. The Company's silk fetches a higher price in London. Their agents make advances for the silk, and it is their duty to see that it is not afterwards sold to others. The natives employed in the Company's factories had certain privileges, now done away with. They could not be summoned in a civil suit till after the silk harvest; and they were more protected from oppression. The Indian silk is not capable of much further improvement, as its great defect is want of staple. The cultivation of silk may be improved. It might perhaps be extended by a greater application of capital. The power of holding lands is very essential to the cultivation of silk by Europeans. There is no obstacle to the extension of the cultivation in the regulations of Government, but sufficient encouragement is not held out to the people, yet the growth has been increasing. It does not require a considerable capital. Both silk and indigo appear to be attended with very little expense. It would be an advantageous speculation for a British subject, possessing capital, to undertake the cultivation of silk upon a large scale. Private individuals have not made the speculation

answer.

answer. In silk and other things, all the attempt not been attended with success. The introduction of silk in Bangalore was successful. Indian silk has deteriorated of late; cleanliness are the principal faults; quantity rather than quality is in measure owing to the system of the purchase of cocoons by weight. It is in purchasing cocoons by weight. Italy can now produce the breed of which attention paid to their food and to the rearing can make little difference. Wherever introduced. The China silk is as good as any in the world; high as the best Italian; but it is not applicable to exactly the same part of the Indian silk is very inferior; the quality has not improved; the reason is from the trade being in the hands of a few, who exercise the strict superintendence that is required. The Company's agents, however, the best, for theirs are the only European filatures remaining. The only way to improve the quality would be to open the trade to the free competition of individual reeling. The Company do not indeed impose any restrictions at present; but their transactions are so extensive that the private trader has no chance. Attempts have been made to establish European filatures, but without success. The Company do not go into the open market; they employ the silk reelers; and they must make remittances; so that they do not mind submitting occasionally to a loss which a private trader could not support. The reeling is much the same as it formerly was. If more attention were paid, there would be better silk. The Indian thread is not so firm as the Italian. The silkworm is removed from one country to another without difficulty; but it soon partakes of the climate to which it is removed, and the fibre of the silk depends in some measure on the food. There is not so much difference in the intrinsic quality of the silk as in the mode of reeling it. The finer sorts are more valuable for some kinds of goods, and the stronger for others. The general impression among the manufacturers is, that if Indian silk were much improved, they still could not proceed without some Italian. They are now generally used together; not to improve the quality, but to reduce the price. An attempt has been made to import the silk of Italy, for the purpose of reeling it in England, but the freight is very expensive, and the packing injures the cocoons. The import of a large quantity of Bengal silk at a low price, the consumption of which is confined to this country, is essential to the prosperity of the silk trade, and the withdrawing of it would be very hazardous. Very little Indian raw silk is sold for exportation; China silk would be preferred. The Company have for some years given up the importation of the latter, and the importation has increased. The Company do not send any silk from India to China.

Sugar.

SUGAR is cultivated in various parts of the Deccan. There are few parts of India, possessing the means of irrigation, where sugar could not be cultivated. It requires irrigation. The employment of British skill and capital in its cultivation might be productive of advantage. The native mode of manufacture is very simple. Their machinery is in a very imperfect state at present, and there is great room for improvement; no doubt the manufacture would be improved by the introduction of better machinery. Sugar is not more extensively cultivated because there is no demand for it; if there were an European demand it would be more cultivated. If there was a probability of a ready sale for sugar, leases for ten, fifteen, or twenty years, might be granted to Europeans with advantage, always provided that the Government had the same control over them as now. No foreign machinery is used in the preparation of sugar in Nagpore; it is the same as has been used from time immemorial. The cultivation of sugar might be extended by a greater application of capital. No sanguine expectation could be entertained of a large increase in the cultivation of sugar. Sugar is a stronger case than cotton and tobacco for European skill, as it is more in the nature of a manufacture, and requires a greater degree of skill and capital. The natives are more likely to engage with advantage in sugar or cotton than in indigo. The manufacture could

to alter the culture have been attended to, which

Another great evil is obtained and proper kept within doors, which silk may be produced silk sells nearly as well as the greater of late years; apparently, who cannot

Hodgson.
do.
Wilson.

do.

do.
Durant.
do.

do.

do.

do.

do.

do.

do.

do.

Larkins
part

Chaplain.

do.
do.
do.
do.
do.

Jenkins
Dunlop
Elphinstone
Davidson
Crawford
Dunlop

Chaplin.
Dunlop
Chaplin.
Robertson.

could be improved without the aid of machinery; great improvement might take place through Europeans; some works are now carried on by Europeans. The cultivation is perfectly free, as is that of cotton and indigo. The description of labourers is the same as that employed in other modes of agriculture; the cultivation is expensive. West-Indian machinery was introduced, and it was found that it did not extract so much from the cane as the simple machinery of the natives. The speculator was a considerable loser; his loss was not attributable to the rate of duty on East-India sugar in England, as he made it for the use of the Commissariat in India, for the manufacture of rum. Two Europeans entered into speculations in Malabar, but both abandoned the project. An attempt was made from 1796 to 1803 to introduce the culture of sugar into Ganjam, but the result was unsatisfactory.

Baber.
Hodgson.

Tobacco.

Baber
Crawford

THE cultivation might be carried to any extent, with due encouragement on the part of Government. Indian tobacco is not worth one-third of what American tobacco is. This may be ascribed to the want of skill on the part of the grower and preparer, particularly of the preparer. There is very good tobacco in China and Burmah, where more care is taken with it. More attention should be paid to the selection of seed, the choice of soil, to weeding, to reaping the crop, to its after-preparation, and to the packing. India could not come into competition with America, but the tobacco of the former might be extensively consumed in this country for particular purposes, if European skill and capital were applied to it.

Chaplin
Hodgson.
Crawford.
Hodgson

Coffee, &c.

THE Bangalore (Mysore) coffee is very good, though not so good as that of Mocha. The cultivation is spreading. The attempt to cultivate coffee in Bengal is a failure. The attempt to cultivate cinnamon, nutmegs, and coffee, at Arcot, failed. Cocoa plantations in Ganjam failed.

Baber.

Cardamums

ARE exported from Malabar to England, and all parts of India. More attention would be paid to the cultivation if the trade were free, and the land would become more valuable.

Canals and Roads.

Fortescue.

THE effect of the renovation of the old canal (Murdan Shah), which ran along the line of the Jumna to Delhi, has been wonderful. As the water went gradually through the province, it fertilized it in an astonishing manner, and to a most incredible distance, right and left, even to the distance of five or six miles; in wells which were completely filled up, and thought useless, the water sprang up again. The canal is too narrow for navigation, and does not convey more water than is required for the purposes of irrigation.

Jenkins.

THERE are very few roads in Nagpore; an attempt was made to form a road to extend to Calcutta, but it was found advisable to discontinue it. There is no communication by canals. In the dry season the communication is carried on by bullocks and carts; during the rains it is almost impossible to carry on any communication.

China Trade.

Toone

THE Company's servants are remunerated by a commission of two per cent. on the sale of all goods, except bullion, exported to China on account of the East-India Company, from England or India, and on all goods sent to London on the same account, and also on teas sent for sale to Halifax or Quebec. The calculation is made in England. The two per cent. is subject to deductions on account of the salaries of two tea-inspectors, two surgeons, and an interpreter; an allowance to the commodore of the Indiamen; a retiring pension to a tea-inspector; and the salaries of all the European servants connected with the factory. In addition to the two per cent., the Company pay the expenses of the table, and the rent of the factories, at Canton and Macao, and the charges of removal from time to time; three per

per cent. covers the whole expense. The amount of commission paid by private traders is from three to five per cent.; generally the latter. The expense of the Company's establishment at Canton is not great; it is not more than the sum to which the commission payable to private agents in the conduct of so extensive a business would amount. The American commission given to agents in China is two and a-half per cent., one per cent. of which is probably given to the supracargo. The commission on the sale of goods at Canton is five per cent. The supracargoes were paid as the whole commission, three per cent. The Company's business might be managed by a smaller number of leading persons, with clerks to execute their orders. The number might be reduced from twenty to ten. A residence of three years is sufficient to qualify a person to manage a trade. A knowledge of the language is highly useful, but not absolutely necessary. Not one of the private traders has such knowledge. It is quite impossible to conduct the Company's business with a smaller establishment than at present; they are constantly employed during the season of business, six or eight months; and they have a good deal to do at other times. The knowledge of mere buying and selling might be acquired in two or three years, but there are other equally important considerations, which require a study of several years, viz. the knowledge of the Chinese character, system, and habits. In this respect the Factory has decided advantages over any private agent. The usual mode adopted by the Company's servants, is to contract for teas in the spring, to be delivered in the autumn and winter. The contract price with regard to the bulk of teas does not vary; with regard to some of the green teas, and to souchong, it does, in order to obtain a supply more suited to the demand, and to compete successfully with the Americans. The contract price of green teas has been occasionally increased; that of black teas was diminished in 1825. The contract prices had been the same for a long series of years. The Hong merchants contract for the teas with the Native dealers, and make advances to them to the amount of two-thirds of the value of the tea, about six months before the delivery. The usual interest of money at Canton between the Hong merchant and the merchant in the interior, is from one to one-and-a-half per cent. per month. The Hong merchant generally gives seventeen, seventeen and a-half, and eighteen taels per cent. to the country merchant; his additional expenses are reckoned at three taels * per pecul; and the Company pay for the peen, twenty-five, twenty-six, and twenty-eight taels. The Hong merchants in general act as brokers; but some of the principal send agents into the country, and buy teas on their own account; in consideration of the profits they derive from the brokerage, they make certain payments to the government. The teamen who sell to the Hong merchants bring the tea down to Canton. Sometimes they are proprietors of tea, but in general only brokers. Avowedly the Hong are the principals, but in a great many instances they are no doubt merely agents. The Company sometimes purchase teas not on contract, to supply the deficiencies in the contracts, which are occasionally large among the junior and poorer merchants, the portion depending on the season. The Hong supply the teas not contracted for, as well as those for which contracts are made. In the contracts, all teas that do not come up to the Company's standard, are rejected. There has been no difficulty in obtaining the quantity desired of black teas, as they are placed almost entirely at the option of the Company; but they have been obliged occasionally to buy of inferior quality; with regard to green teas, they enter into competition with the Americans, who sometimes give higher prices than the Company's servants deem it advisable to give, and then the latter cannot obtain the teas they wish. The teas purchased in the open market have been, with regard to green, sometimes dearer than those purchased by contract; but in general the same scale of price is maintained as with respect to the contract teas. There is no difficulty in getting a sufficiency of black tea, but there has never been so much green tea obtained as the imports required; the black tea supply may be increased. There has been a great defalcation in the quantity of green teas, and there has been a difficulty in obtaining the quantity which the contract required. When the quantity of green tea was not furnished on contract, it seldom happened that there was any

Toone.*
Davidson
Bates.
Everett.
Milne.
Toone

Urmston.

do

Toone.

do.

Urmston.
Davidson
Toone.

Urmston.

Toone.

do.
Bates
Toone

do.
do
Urmston

* The tael is considered in calculating the value of goods at 6s 8d.; its real value, at 5s. 2d. The ounce of silver, being about 6s.: 72 taels are considered equal to 100 dollars.

	any of the requisite quality to be found in the market. The teas bought in the market are sometimes equally good, sometimes inferior, to contract teas; inferior are sometimes taken to make up the investment. Of young hyson the quantity needed was not always to be procured; of the other qualities of tea, sometimes the price was a little higher, but there was no deficiency in quantity. Green tea is not so abundant as black, but the Americans have not found any difficulty in obtaining as much as they wanted. The export of green teas has considerably increased. Particular kinds of green tea have advanced in price. The Americans buy the high-priced green teas, which seldom come to England. The Americans generally take green tea. The Company do not succeed in obtaining as much as they wish of the better qualities of black teas. The greatest varieties of tea are supplied in England by the private trade of the officers of the Company's ships. The Company supply but few varieties. The private traders supply finer teas than the Company. The staple teas of the Company are certainly better, but those purchased by the Company's officers are fancy teas, which are beneath the notice of the Company. There would be no difficulty in the Chinese furnishing a larger supply of tea to this country to the extent of many millions of pounds. The Company have frequently had considerable difficulty in getting the better kinds of tea. They have been sometimes compelled, when they could not obtain tea of a better sort, to make up the quantity with teas of a lower quality than that formed the contract quality; but they have always been exceedingly cautious and particular. Their investment is, owing to the vigilance of their servants, of the same quality as it was, though the demand has increased of late years. The tea now imported is rather better than it used to be, being more carefully prepared. The teas have deteriorated in quality, as the quantity has been increased. The Company have never introduced the coarser teas. The brokers have advised them against doing so. They have always given orders that the quality should be kept up, that no discredit may be brought on the article. As the duty forms so large a portion of the price, any thing very inferior in quality would not be brought here for consumption. Tea is grown over a large part of China, but that which suits our market is grown only in a few provinces; the black in the province of Fokien, and the green in those of Che-kiang, Kiang-nan, and Kiang-si. It is supposed that the difference of culture and preparation makes the difference between black and green; but it is a disputed point. Tea is consumed throughout China. The inhabitants in general drink black tea. The teas are nearly a year old when they arrive in England, and they are kept another year before they are sold. Green tea loses its flavour by keeping, but black tea will remain for two or three years without injury. Old teas are not so valuable as new teas by more than five per cent. New teas are decidedly better than old. The Chinese have a mode of refreshing the old so as to give them the bloom of new teas. The Company purchasing by contract, obtain teas on as advantageous terms as individuals in the open market. They have the chance of procuring better teas. The Americans and the Company's ships' officers in general deal with the outside merchants, but the goods bought of them must pass through the hands of the Hong. It is understood that they do not obtain teas, on an average of years, on such good terms as the Company do. Mr. Davidson, a private merchant, almost always dealt with the Hong, and not with outsiders. Captain Alsager, a commander of one of the India Company's ships, always dealt with the Hong, and had no difficulty. Those who, to make a greater profit, dealt with the outside merchants, have had bad teas, and some trouble in obtaining the money for their goods. The Company have the choice of the teas; most distinctly, those purchased by the Americans are inferior, but at the same time cheaper; it is presumed that they find such more profitable. There have been instances in which the Americans have contracted for teas. The Americans purchase on as good terms as the Company; they sometimes buy on contract, but more generally in the open market; they buy both from the Hong and from the outside merchant, but not from those who actually bring the tea from the interior. The Americans obtain their teas at as low a price as the Company, but not so good; neither do they seek to do so. They probably find them not so suitable to their markets. Teas in the open market may in small parcels be obtained as good as the Company's, but not in large quantities. Much of the tea brought home by the officers of the Company's ships has been rejected at the tea sales as bad; it was probably bought from the outside
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outside merchants. The Company's business has generally been divided among all the Hong merchants: when the poorer or junior merchants have not been able to procure their teas by themselves, it has generally been done through the agency of the senior merchants. Private merchants have found it more profitable to deal with insolvent Hong, supported by the Company. The tea merchants are without capital, and depend on the advances made to them by the Hong merchants. Large advances are made by the private agency houses and by the Americans to the Hong merchants.

At the Company's sales in London the tea is bought by brokers, to whom a commission of a-half per cent. is paid. The price at which the tea is set up is taken to be a remunerating price, covering the cost of the tea in China, and the expense of bringing it home. In most cases the selling price is considerably in advance of the upset price, which may be attributed to the inadequacy of the supply. The advance at the June sale of 1830, above the cost at Canton in 1828-29, was from 66 to 195 per cent. Occasionally the teas do not fetch the upset price; when they are refused by the brokers it is because, in the opinion of the latter, they are not worth the money; the brokers show thereby that they differ in opinion with the Company's officers at Canton, as to their estimation of the teas. The company charge their ships' officers 26 per cent., *ad valorem*, on the teas sold for them: on silks, which on an average amount to threefold the value of the teas, they charge 1½, and on spices 1¼ per cent. It is supposed that they make this difference in order to prevent their servants from entering into competition with them in teas. It is a great inconvenience to the trade that few tea sales occur in the year: they ought to be more frequently held. The consumption of tea might be materially increased: that of coffee has increased since 1824, 130 per cent.; but that of tea not more than 26 per cent. The lowest and the finest qualities of teas might be the most increased. The reduction in the price of teas of late years is attributable to the increased quantity declared by the Company for sale, and to the increased consumption of coffee.

provided by the Company in China are the produce of goods imported from London and India; the deficiency is supplied by bills drawn on Bengal and on the Court of Directors; the bills on Bengal amount annually to one-and-a-half or two millions of dollars. The funds provided in China, which are given to the factory for their bills on India and on London, are the proceeds chiefly of opium and of the general exports from India. The bills on England and India are drawn at the mercantile rate of exchange, or at rather less, in consequence of the greater security of the Company's paper. Of late years the Factory have drawn as little as possible on London, and there is great difficulty in obtaining bills. The Company's bills are of great use in making remittances.

The sales of British manufactures in China are thus conducted by the Company: their servants send for the Hong merchants, and showing them the samples, allow them time to make their offers; the goods are then sold either to the Hong in shares, or to the best bidder; the woollens are divided; the cotton is always sold to the best bidder. In calculation the value of the goods, the tale is considered worth 6s. 8d., though its real value, at 5s. the ounce of silver, is about 6s. Seventy-two tales are reckoned equal to converted into tales at their intrinsic value. In general the cotton

trade from India to manufactures from and has been a capital trade for the Company. The trade in British manufactures from and been always attended with loss. Whatever the price may be that can be it practice of the Factory to sell all that are consigned to them. The price at have been sold in China has diminished, but not so much as the price in London; the consumption has not increased with the diminution of price. The Chinese merchants state that they have a difficulty in selling British manufactures. Woollens are chiefly used by the Chinese for furniture, and for the dresses of shopkeepers and the poorer classes. The woollens are sent all over China by canals. They are subjected to a considerable transit duty, at the frontier of every province. The export of British manufactures by the Company has not been so profitable as it used to be, though the price in China has not fallen at the same rate as the price in England, which is attributable to the resources possessed by the Chinese in their own silk and cotton manufactories,

Urmston
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and Maxfield
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Urmston.	nufactories, and China is much more impoverished as a country than it was. The prices of their own commodities have not fallen.	cotton goods, they manufacture a larger quantity than formerly. There are no woollen manufactures in China, but there is much less demand for our woollens than there formerly was. Though the prices of manufactures have fallen in England, they have not produced an equivalent profit in China, as they have fallen there rather more in proportion. Captain Alsager never took British manufactures to China except as a forlorn hope. Woollens have been imported from England almost entirely by the Americans; they have not been imported by the country trade from India. Caracots are much cheaper than they were, they have fallen from 140s. to 78s.; the fall is attributable to the use of yarn spun by machinery, instead of that spun by the hand, to the low price of wool, and to the diminution in the cost of dyeing; the quality is 5 per cent. better. The Company buy by tender; their orders have decreased. Since the price has fallen, the importation of woollens into China has increased. The demand might reach to any extent, if the price did not prevent it; if cheaper, they would be more generally worn. The Company have attempted to sell cotton manufactures, but the sale has been less profitable than that of woollens. The Chinese have a very good cotton manufacture of their own, in which the people, with the exception of the richer classes, are chiefly clothed; it wears better than ours. They have no prejudice against ours, but the Chinese government would probably protect their own manufacture, if our imports of cotton goods were carried to a great extent. Their cotton is spun by hand. The Chinese attend to durability; they are very exact judges of quality. The nankeens of China have hitherto been thought superior, but the difficulty in competition is now overcome, and by-and-bye nankeens may be carried to China. The French now make nankeens superior to the Chinese. Cotton manufactures to a certain extent have been imported into China from England by way of India; and the import is rather increasing. Their cottons are cheap and strong; at the present low prices we should perhaps compete with them in cost, but our manufacture is not so strong as theirs. They have no prejudice against buying the British article; but the duty on the raw material is so little, and so cheap, that they can manufacture very cheaply themselves. The country taken a good deal of cotton manufacture to China, but it has found by no means a sale. Cottons have been rather omitted from the list of exports to China in the year 1827. Mr. Magniac was never employed to sell in China woollens for British merchants, and very seldom cottons; but since his return to England, in 1827, his house has had considerable consignments both of cottons and cotton yarns. A new shipment of cottons has been made with success. The Company have exported cotton twist, it is said, with advantage. The importation of cotton yarn will probably increase. There are no new articles of export to China, but it is understood that trial is being made of cotton yarn. The price of raw cotton in China has declined very much of late years; the quality of a portion was formerly of a superior description, but that probably finds its way to Europe. The cultivation of cotton appears to have increased in China, judging from the circumstance of the price having fallen considerably. Some Norwich shawls have been sent to China, and the trade is rather increasing. The chief articles consigned for sale in China are cotton and opium, forming nine-tenths of the whole. The principal dealing is in opium. It is not imported regularly; it is sent into the country from the ships; every now and then there is a strong edict against the trade, but like other Chinese edicts, it is nearly powerless. It imposes a little difficulty perhaps for the moment, and enables the mandarins to extort money from the dealers. The opium business was originally transacted at Macao; but the charges of the Portuguese, and the difficulties thrown in the way by the mandarins drove it partially to Whampoa, and finally and entirely to the place where it is now carried on. Turkey opium is almost entirely imported by the Americans. The opium is almost wholly paid for in China by bullion. The opium trade is now so comfortably circumstanced that no change is required.
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The American tea trade has been much overdone. The Americans are not great consumers of tea, they mostly use coffee; six or seven millions of pounds is their average consumption of tea. The loss which the Americans have experienced arises from persons engaging in trade on insufficient capital, and being tempted by early gains to overtrade. The American

American trade was at first profitable; during the last four years it has been unprofitable, and now it is beginning again to be profitable. The goods taken to China have in general sold well, and for a fair profit; but the return cargoes have been unprofitable. The imports from China, besides tea, were silks, nankeens, and bills of exchange: the silks were profitable; the trade in nankeens has almost entirely fallen off, from the great variety of pantaloons stuffs made in England and other countries. The return in tea used to be safe, but of late it has been ruinous; the loss has been from 25 to 30 per cent. A profit may have been made on the outward voyage on British goods taken from this country; but the tea market has been overstocked, and the teas in Europe have fallen very low; the trade to Canada has been completely cut off; coffee is low in price, and the Americans breakfast on coffee. The Americans have imported much China raw silk into this country, *via* America, and also silk manufactured goods; sometimes the trade has been profitable, sometimes losing. The Americans have given up the purchase of any other article than tea; they can be better supplied with silk from England than from China. It is not certain that the want of a return cargo which could be disposed of in the English market, has caused the limitation of the American speculations in China; the unprofitableness of the returns has imposed a barrier, to which no doubt their exclusion from the best market has contributed. The Americans used to send to China only dollars; they generally purchase with dollars; they now send merchandize also, almost entirely British; they succeeded better this year in vending such goods in China. A person has been employed who had some knowledge of the caprice and taste of the people, and his employment has been beneficial. The Americans send from England to China, British woollens, cottons, metals, and opium—Turkey opium, the trade in which has rather increased. These adventures have been upon the whole profitable, not giving large profits, but a regular small profit. It is presumed they have been profitable. The woollens are of the same kind as those which the Company send, with perhaps a few imperfections as to colour, but equally good in quality; they are bought rather cheaper, and not sold for less than the Company's. They are quite as good, and bought with as much care, and nearly the same sorts are taken. They are probably better; they are bought by contract, not by tender; the latter is a bad way. The Company's goods are subject to an inspection which creates delay in the payment for them; this does not happen with the private merchants, and they are consequently able to make themselves as desirable customers to the sellers as the Company are. The quantity of camlets rejected by the Company is very considerable; their inspection is not always conducted with fairness and discrimination; those rejected by them have been frequently sold to private merchants, and exported by them to advantage. The American demand for camlets has been very much on the increase since 1821; the goods made for them are of the same kind as those made for the Company; there is in fact little or no difference between them. Not one-tenth of those bought by the private trade have been rejected by the Company. The best bargain that the manufacturer can make is made with the private merchant; the latter perhaps obtains the goods cheaper than the Company do, but it is more advantageous to deal with him, as the Company's pieces are subject to be returned, and to many deductions, amounting to from 5 to 7½ per cent.; by that amount the price to the Company is increased. They cut off one of the marks from the goods which they reject; this injures the piece very much, and renders it unsaleable, except at a great diminution of price. The Americans always have the goods which they purchase inspected. The goods purchased by Mr. Brown were shipped under the mark of his principal, and not under any imitation of the Company's, his own mark obtained as much credit. The American camlets are charged at the same price as the Company's; they are the same article, and are ingeniously packed and marked, so as to look like the Company's; if they gain anything by them, it must be owing to smuggling. The Americans did not export to China manufactured goods previously to 1818, as they were before that period, too dear; the exports were principally in specie. The export of cottons and woollens has increased in quantity, but from the fall of prices the value does not appear so much increased as the quantity has been. Woollens and cottons in the manufactured state have been the most profitable investment; if the Company have lost by them, it must be owing to their expensive way of doing business. The commission

Brown.
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Bates.

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Brown.

Shaw.
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Shaw
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Brown

Urmston

Everett

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Bates.
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Magniac
Everett
Crawfurd
do.

Toone
do
Magniac

on the sale goods at Canton is 5 per cent.; that for purchases in England 2½. There is no difficulty found in the sale of such goods in China. The sale is increasing, although but slowly. The American trade in woollens has been profitable since the late fall in prices. The Americans send woollens and cottons from the United States also. The exports of British manufactures by the Americans have increased; they sometimes export manufactures from the United States, but more frequently from England. They have not in America the means of exporting manufactures to a large amount; they have no manufactures of their own to give. It has not answered to take American cotton to China. There is generally an American ship every two years from the north-west of America. American vessels occasionally arrive at Canton from South America; they import bullion, and sometimes copper. The import of silver has been very profitable; it comes in large masses from South America, and is sold at a considerable premium.

Bates
Stewart.
Everett
Maxfield
Brown.

Milne

Brown

Everett.

The British might carry on the trade as cheaply as the Americans do. They might carry it on, on better terms. The Americans have not carried the trade to such an extent as it might have been carried, if it had been open and free. They have not the capital to be found in England. The British would drive the Americans out of the market. Mercantile capital is much more plentiful in this country than in America; the interest of money is less, and the expense of navigation as little. The British would be able to carry on the trade as advantageously as the Americans. An English merchant or manufacturer would understand the shipment of goods better, with regard to a free trade. It is very difficult to enter into competition with a large manufacturing house in this country. A manufacturing people would enjoy greater advantages than one that is not manufacturing. If the trade had been open, and the speculation carried on by British instead of American merchants, the result would not have been to the former more profitable than it has been to the latter. They must have sustained a loss by the export of teas. The British could not, unless they altered their system, carry on the trade so cheaply as the Americans.

Magniac.
do.
do.
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Toone.

Stewart.
Toone.
Magniac.
Toone.
Alsager.
Davidson.
Stewart.

Crawfurd
Everett.
Crawfurd.

Magniac

Crawfurd
Magniac
Crawfurd
Shaw
Magniac

The private merchants sent home from China raw silk, silk piece goods, nankeens, bullion and dollars, and bills of exchange; all considered as merely effecting a remittance; the profit was certainly not considerable. Raw silks and nankeens have been employed to a considerable extent as remittances. From China to India, the remittances are made in bullion, dollars, bills, and a long list of goods. The country ships go from India to China partly laden with cotton, and fill up at Singapore with articles the produce of the Eastern islands; but they take mostly cotton. They carry back dollars, tea, sugar, silk, and drugs. At Bombay there is a larger demand than at Calcutta for Chinese goods; but much silver is always taken. The officers of the Company's ships principally take cotton from India to China. They used to export from China, drugs, raw silk, and nankeens (but very little now-a-days of the last) and tea. Tea was a more profitable investment than silk. The returns made from China to India were the Factory bills on the Indian Government, silver, and other articles. British manufactures might be sent to China by the country trade from India; but it is probable that the raw cotton affords a better chance of profit than goods with the advance necessarily put upon them in India. Considerable quantities of British manufactures are sent to China by means of the country trade. The British merchant has not availed himself of his power of making shipments of British goods in American vessels, for trade with China. The British merchant has certainly now the means of sending British manufactures to China through Singapore, but he has not the means of making a return. It is possible to send British manufactures to China, trans-shipping them at Singapore; and to receive Chinese goods (tea excepted) for England, in the same way. The expense of trans-shipment would be from a-half to one per cent. It would not be very considerable. British manufactures might also be sent to China by the Company's ships, as they go nearly empty. The Chinese very seldom purchase British manufactures from the Eastern Islands, for sale in China. Many British camlets are sold to go to Singapore; the trade is increasing. The Chinese use no knives or forks; their hardware is much cheaper than ours: they have more regard to cheapness than to quality; the price of our hardware is an obstacle to its use among them. They have no disposition to use such articles

articles of ornament as Birmingham imitations of gold, &c. There is a considerable export of British manufactures to Java as well as to Manila, though the regulations at the former place are much in favour of Dutch goods.

The Dutch Company endeavoured to supply Holland with tea, but they met with considerable loss.

The Chinese are a people much attached to old customs. They are superior as artificers to the natives of India, and their merchants are not inferior in ability. They are distinguished as merchants and as artificers. The Chinese are always disposed to trade. One Hong merchant has given an order in this country for British camlets. There is a good deal of intercourse between Manila and Macao; the vessels sail under the Spanish and Portuguese flags, but it is understood that they belong to the Chinese; they import the produce of the Eastern Archipelago. The Chinese are allowed to trade only to one port of Japan; they are more restricted than the Dutch are. Greater facilities are given to trade in the port of Canton than in almost any port in the world. The commerce of the port is carried on in broken English. The regulations with respect to the entrance of foreign vessels are very strict; but perhaps they are not rigidly enforced. The Americans have not found any difficulty. The American agents experience no difficulty in managing their concerns, either from the regulations of the government or the disposition of the people: if they conduct themselves properly, they have never experienced much difficulty. No ship can commence her commercial operations till a Hong merchant has become security for her. The Americans have frequently found it difficult to obtain a security merchant. It is less difficult for the country ships from the circumstance of their being British, for it is known that they are under the Company's representatives. Silver is constantly exported from China, as opium is imported, although the trade is illegal. The regulations of government calculated to prevent trade with foreigners, are habitually set at naught; so that in the event of a total stoppage of the trade, tea would probably still be exported. If the trade were interrupted, tea might be supplied through Singapore, but not without great difficulty. The Chinese would tax it heavily. The experiment of carrying on smuggling on the coast of China, in the same way as it is practised in the harbour of Canton, did not succeed. Attempts have been made to carry on a trade in opium on the coast of China, but without success, also in cotton, but the vessel was obliged to return to Canton with the cargo unsold. Trade on the coast of China could not be legally carried on, as the government prohibit trade in any port except Canton; the exactions of the mandarins would be too great. The Americans have not attempted to trade with any port except Canton. Country ships have gone on the coast, particularly with opium, but they have not met with success. The Russians made an attempt some years ago to trade with China by sea, but an order came down from the Emperor of China forbidding them so to trade. The Canton government had, however, previously given them permission to load with tea. The Emperor did not understand how they could come to China from opposite quarters; and the Chinese said that the English must have shown them the way.

The country trade between India and China is almost entirely in the hands of the British mercantile houses at Calcutta and Bombay; there is scarcely any trade with Madras. The country trade is principally in the hands of British merchants, but the Parsees of Bombay are also personally engaged in it, and the capital of the Hindoo merchants of Calcutta is employed therein. The country trade of India competes largely with the Chinese in the trade from the British possessions in India, and the Malay Islands, to China. The country ships are very fine merchantmen of from 500 to 700 tons; a few are as large as 1,000 tons; they are manned with Asiatics, but officered by Europeans. Before sailing from Bengal to China, they are obliged to enter into a bond to conform to the regulations of the Company's supracargoes.

The officers of the Company's ships are remunerated by a small monthly pay, but principally by the share of the tonnage allotted to them; 103 tons between China and England, and two-fifths of the tonnage between India and China. Whatever they bring home is sold at the Company's sales, and the Company charge a duty of twenty-five per cent. on the goods

Bates

Bates.

Davidson
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Urmston.

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Magniac.

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Alsager
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Stewart

so sold. The officers make very little by the direct trade between England and China, but a good deal by that between India and China. A fair average gain for the commander on a voyage is £5,000, the capital employed being about £50,000.

The Company's ships carry 30 or 40 guns, and 130 men; 26 guns, and 135 men. Chests of tea taken in large ships are stowed more rapidly, less liable to be broken, and less damaged. There is no difference with respect to liability to damage between a large and a small vessel, if the latter be dry. The merchant must, in a pecuniary point of view, give the preference to the smaller vessel, but there are many advantages in those of a larger size; the cargo is packed better, the vessel is more readily loaded, and the tea would come home better, though it is not a cargo that is much damaged. A vessel of 600 tons is better as a merchant vessel than one of 1,200, except with regard to the port-charges at Canton, which are heavier in proportion on the smaller than on the larger vessel: the cargo is not safer in large ships, and the insurance is not less. The difference of port-charges does not counterbalance the disadvantages. The most economical vessel would be one of 450 tons, navigated by eighteen or nineteen men. The most advantageous size would be one of 500 or 600 tons, the American size.

With regard to the purchases of tea in China, the Company carry on their trade as advantageously as any private merchant could, and they could continue to do so without the aid of monopoly. Their establishment and long connections give them some advantages, but any mercantile house provided with adequate means could trade on the same terms. No company can carry on trade with so much advantage as a private merchant can, provided he have sufficient capital; the persons managing the great concerns of the Company do not bestow the same degree of care, as, whatever may be the out-turn, they have neither more nor less in the shape of interest and revenue. A private merchant would consult the caprice and taste of the Chinese. The Company, without the monopoly, would still, as a combined commercial body, conduct their trade at Canton to advantage, provided it was managed on the same principles and in the same manner as now. No public body constituted as the Company is, can possibly compete with the quiet enterprise and economical management of the intelligent and industrious individual merchants of this country. If the monopoly were at an end, an increased demand for British manufactures would grow up; enterprising manufacturers would send out goods, and probably lose much in the first instance, but a taste would be created and large quantities ultimately sold. The articles now sent would be sent on a larger scale; cloths, metals, cottons, &c. In the event of opening the trade there would be a considerable increase in the exports of British manufactures; the Chinese would receive the manufactures of England, and they would enter more generally into the consumption of the country, if the trade were in the hands of private merchants, as it requires considerable management to introduce the different articles. If the trade to China were open, the British merchant, and not the American, would supply foreign Europe with tea. The Company's monopoly is an obstruction to trade. If those who carry on the trade from the different parts of India could carry it farther, there would be less loss of freight: a ship would proceed from England to Bombay and Calcutta, and go thence to Canton; but it cannot proceed from Canton to England, there is a return voyage without profit. The Company make by their bills on England the returns which the private merchants would make, but then the private merchants are obliged to take those bills; besides, the trade would in all probability be greatly extended if the monopoly were to cease. The hope of gain from tea would form an additional inducement for the export of British manufactures, and the one acting on the other would increase the trade very much. It might not always be profitable, but in the end it would be. At present the Company's ship goes to China without a freight, and returns with one: the private trader goes with and returns without. The China trade is capable of great extension, provided greater capital were employed. The opening of the trade would affect the commerce of this country beneficially, inasmuch as under the operation of a perfectly free trade to Canton, there would be a greater consumption in China of the staples and manufactures of England, particularly woollens and metals, but more especially metals, and China, in its varied productions, silk, drugs, nan-keens,

keens, sugar, and tea, would afford the means of making returns directly to this country, if it were desirable, in goods without loss, while returns to a great extent might also be made in bullion, there being in general an abundance of gold and silver at Canton; the trade would also employ an increased number of ships and seamen. The effect of such a trade would operate in India on the same principle. Perhaps the most profitable mode of carrying on the trade with China, if it were perfectly free, would be circuitously by India, but British manufactures would not be so sent. The power of making returns in teas, or of making any returns, would greatly facilitate the transactions of the India trade generally. If the trade were opened and a greater quantity of tea exported from China, tea would be deteriorated, as the Company cannot now obtain as much as they wish of the better qualities, and as it apparently answers better to the Chinese to produce a middling quality at a middling price, than a better quality at an advanced price. The finest black teas would almost disappear. By a free trade in tea the export of British articles would be considerably increased; woollens, camlets and cotton piece goods would gradually and eventually find their way into China in considerable quantities. The exportation of teas would afford the means of remittance, the bar to trade at present being a want of returns; and the profit would probably be looked for on the exports to China. Perhaps, under an open trade, hardware might be introduced. The superior activity and enterprise of individuals must open new channels of commerce. The difficulty of making remittances arises from the merchants not being able to deal in tea. In the making of remittances the merchants would be in a better situation if the trade were open and conducted on sound principles. The first effect of an open trade in tea would be to raise the price, because numbers of speculators would rush to buy, but ultimately the tea growers and merchants would be satisfied with remunerating prices. If the trade were open, private traders would have considerable difficulty in obtaining a Hong merchant to become their security. The Americans have not experienced any difficulty in trading, and the free trader would not be exposed to more difficulty. The tea brokers of London are anxious to confine the trade to the port of London. The tea dealers are divided in opinion, but they would like an open trade, if it were confined to London. If the trade were thrown open, there is no doubt that there would be a greatly increased consumption of tea. Tea might be imported at a cheaper rate by private merchants, who would be content with a portion of the Company's profits.

In spite of the great interests which the Chinese government and people have in maintaining the trade, they will in their arrogance stop it. This must happen sooner or later under the present unwise and undignified system of dealing with the Chinese government, but it would happen sooner under an open trade. There can be no permanent increase of trade without previous negotiation with the Chinese government. There is no salvation for an open trade in the absence of the power and political influence of the Company, without a previous understanding between the two Governments. This country will be compelled to negotiate directly and vigorously, and not through the medium of a mere complimentary embassy.

Private merchants certainly derive advantage from the existence of the Company as a great trading body at Canton. There would be cause for an unwillingness to settle in Canton, but for the power of the Company, in some measure at least, to protect commerce. They possess important influence from their general character and extensive trade. The influence of the Company is a counterpoise to that of the Hong. But for the existence of the Company in China, British trade could not be carried on. The exaction and oppression of the Chinese government are so great that no one would be fool-hardy enough to hazard his property on shore, but from a knowledge that there is a body like the Company to protect it. The Company, by their power and influence generally, have been able to gain points with the Chinese, which have frequently proved beneficial to other nations. The same objects could not have been effected if they had carried on trade to the same extent, but without monopoly. It is the great combination of their influence which gives them a control over the markets generally at Canton. They have the power of stopping the trade with the country ships, which gives them great influence with the Hong merchants. The same power,

and Maxfield
Stewart.
Magnac
do.

Davidson

do.

Urmston
Bates
Mills

Davidson.

do.
do

Davidson

Urmston

Urnston so far as regards the Chinese, could be exercised without monopoly, if the trade were as great. The probity of the Company's dealings, the magnitude of their trade, and the confidence which the Chinese have reposed in all their acts, have given them a powerful influence with the Chinese; they have frequently averted exactions from the trade, and induced the Chinese to give up points which otherwise might have been attended with vital consequences. Some minor points have been obtained by Americans and others, on their own representations; but those of importance which the Company have obtained, could not have been gained by the Americans. The power of stopping the trade is not a great obstacle to commerce. It has not been of advantage to the Americans that the Company were established at Canton. An individual in the capacity of consul could not do so well as the Company have done. The Chinese would always refer to the trade, and not to the consul. A consul would not have the slightest weight or influence so long as there was a great commercial body at Canton. If the Company's trade diminished, their influence would still prevail to a considerable extent: the Chinese could not easily be brought to forget the importance of the Company. The power exercised over the trade by the Company's Factory, could not be so well exercised by a King's consul. The Factory have great influence over the Chinese merchants from the trade which is in their hands, and the merchants have it in their power by their representations to influence the officers of government. A King's consul might exercise the same power as the Factory possess, with regard to the country trade. Private merchants could not be persuaded to suspend their private transactions for any general good, and would not act cordially with the consul in suspending the trade. If power were given by law to a consul, the best way of his exercising it would be by its being made obligatory to deposit the ship's papers with him. If the trade were opened, it would be necessary to establish some public authority at Canton, which should have the power of controlling Europeans visiting China. The authority now vested in the Company's Factory is sufficient, and should be retained. They have very extensive powers; they can remove any British subject from Canton; they can interdict the trade at any time they please; and all ships' crews must obey their orders. It would not be necessary that there should be a deposit of the ship's papers. Under an open trade, free traders would have no difficulty, as the consul would point out to them the regulations to be observed. It is a great advantage to the trade in general, that the Company's servants, acting as one body, and carrying on an immense trade, are enabled to resist the exactions thrown in the way of trade by the Chinese government and its officers. Individuals cannot be brought to act as a body; their interests are various and opposite, and each acts for himself. A consul, unconnected with the trade, cannot have the same power as persons who are both connected with the trade, and have authority also. The Dutch and American consuls have little or no authority over their countrymen. The American consul is generally a mere cypher. The Americans suffer commercial inconvenience from want of unanimity among themselves, and of the unity of a public body. The American consul has made representations to the Chinese government, and has sometimes obtained redress, sometimes not.

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APPENDIX, No. 2.

DIGEST OF EVIDENCE given in the COMMONS' REPORTS ON EAST-INDIA AFFAIRS:
Second Report of 1830, and Reports of 1830-1, and 1831: on COMMERCIAL Subjects.

	Page.		Page
Indigo	623	Paper	631
Silk	625	Gold	631
Cotton	626	Copper	631
Wool	629	Stone	631
Tobacco	629	Iron	631
Sugar	629	Coal	631
Coffee	630	Steam Engines, &c.	632
Rice	630	Roads, &c.	632
Cochineal	630	India Trade	633
Lac-dye	631	China	643

II. FINANCE.
*Commercial.**Indigo*

THE importation from India commenced about forty years ago, but it has so greatly increased as almost to have superseded all other indigos. The cultivation is carried on from Dacca to Delhi; the average quantity of exportation is 9,000,000 lbs.; the amount paid by British-born subjects, for rent and labour, is stated to be £1,680,000; on its arrival at Calcutta it is valued at £2,403,000; and it is said to realize in England £3,000,000. The annual value of the indigo exported is from two or three millions sterling, but it varies very much. It is exported chiefly to England; some to America; some to France, where the consumption has increased of late years; and a small quantity to the Persian Gulf. There are from 300 to 400 factories in the Bengal provinces; chiefly in Jessore, Kishnagur, and Tirhoot. The best soils are those that are liable to inundation from the Ganges. It does not require a very deep soil. Indigo is raised in the Madras provinces, as well as in Bengal, for exportation. There is none exported from Bombay, though the soil and climate are suited for it. Indigo, in small quantities, is exported from Madras; it is very inferior to that of Bengal. There is very little cultivated in Coimbatore; the cultivation is not found to answer. The culture of indigo has increased the value of land very greatly; it has raised the price of labour, and therefore improved the condition of the people, as is seen by their being better housed and clad. In Tirhoot the land rose from 2s. 8d. and 3s. 3d. per acre to 4s. 7½d. and 7s. 6d.; there has been a rise of fifty per cent. in the price of labour; and rents have risen in Tirhoot fourfold, and generally they have been doubled. The introduction of indigo has given great facilities to Government for the collection of the revenue. On fifty-six indigo factories the average annual outlay for six years, without including interest or commission, has been £319,300; they return £398,100; the gross profit is £79,600. from which, to ascertain the net profit, a deduction should be made of eighteen or twenty per cent. for charges and interest of money.

The low price of indigo in Europe will diminish the quantity produced. The agency houses have withdrawn their support from all the inferior soils, which the high prices had brought into cultivation. The quantity of indigo could be increased, no doubt, but at present the quantity supplied seems to be as much as is required in Europe.

The manufacture of indigo could not be carried on under a system in which the government took half the gross produce; it requires too much capital.

Gisborne, 1072
Crawford, 1189

Bracken, 49
do. 58
do 157, 158
Rickards, 2830
and Ritchie, 1515
Gordon, 605
Sullivan, 5116
Crawford, 1895

Bracken, 56

do 146
Gisborne, 1087
do 619

(Commons),
1830, 1830-1, 1831

Bracken, 110

do 58

do 141, and
Chaplin, 5319

do 178

do 183

do 188

Crawfurd, 1885

Gisborne, 1770

Rickards, 2815

Bracken, 160

Gordon, 647
Crawfurd, 1907.
Bracken, 136

do 344

The order which allowed Europeans to hold land for the cultivation of indigo is encumbered with many restrictions.

The great firms in Calcutta make advances to indigo planters. Generally speaking, in the commencement of their career the planters borrow their capital; and the money is advanced by the agent in Calcutta, at an interest of ten or twelve per cent., on a mortgage of the property. The interest is high because there is considerable risk. The actual stock mortgaged is comparatively of small value, in some instances merely equal to the annual outlay; so that in the event of an unfavourable season there would be a greater deficiency perhaps than the mortgage could cover. Natives in Calcutta borrow at twelve per cent.; in the provinces not under the jurisdiction of the Supreme Court the interest is much higher, twenty-four or thirty per cent., attributable to the risk. Some of the factories within the last six or eight years have got completely out of debt; some of them have been obliged to abandon their factories from the amount of their debts. In addition to the interest, agent charges to the planter two and a-half commission upon advances, and two per cent. upon sales. The indigo plantations are carried on generally by the capital of the houses of agency, banking-houses, and merchants of Calcutta; but there are men of large property in this country who are indigo planters: there are also indigo planters on the spot who are men of independent property. The natives have begun to imitate the European process of manufacture, and have invested large funds in it; but their manufacture is in general very inferior. The natives make indigo upon the European plan, but of inferior quality, because they do not take the same care in the process; but they have shown no objection to adopting the European system. The natives of Oude have lately adopted a better mode of preparing indigo for the European market; occasioned partly, no doubt, by the example of Europeans, but in a great measure also by the unsaleable state of the article as formerly prepared, which rendered it indispensably necessary that some improvement should take place before it could be brought into general use. The manufacture and export were certainly not entirely begun by Europeans, for indigo as a colour has long been known and used in the East, and therefore manufactured, as well as exported, by natives alone. The great extension of the manufacture of late years is no doubt to be ascribed to British enterprize and capital; but of the present produce of the British provinces (exclusive of what is produced in Oude), at least about 20,000 chests are actually grown and manufactured by natives alone. Some of the specimens manufactured by natives are as fine as the most beautiful products of the European factories, but this is not generally the case.

Many of the indigo planters have resided a considerable time in India; the majority are British-born subjects; there are many Frenchmen. There are some half-castes among the indigo planters, and they have advantages by being enabled to take farms and leases in their own names; one of the largest concerns in India is held by a half-caste.

The greatest advantage that Bengal at present possesses, is the presence of such persons as the indigo planters. The indigo planters have that sort of influence which properly gives everywhere. The indigo planters are a very respectable class, and men of extremely good information. As a body, they do not ill-use the natives, though there have been individuals among them who have committed violence. There are now men of better education in that line than there used to be. The result of the inquiry into their character is said to have been very favourable. Indigo planters settled at a distance from an European station have been of much use in arranging the little disputes of the natives. Some of the civil service have recommended that respectable indigo planters who live at a great distance from stations, should be recognized by the Government as arbitrators, and, under certain regulations, as magistrates. None of them are now in the commission of the peace, but it is desirable that they should be entrusted with that office. They are in closer contact with the people, and live upon greater terms of familiarity with them, than gentlemen of official rank do this, to a minor extent, would unquestionably give them facilities in settling the disputes with the natives, but they could not devote their time to any very important cases.

Silk.

THERE are three species of mulberry trees cultivated in India, the white mulberry, which is used for feeding silkworms in Europe; the dark purple mulberry, used for the same purpose in China; and the Indian mulberry, used for the same purpose in India. For the purpose of feeding silkworms, its growth is confined to Bengal Proper; it has been increasing. It is cultivated from small strips, instead of the large tree; it is cultivated in beds; it is a distinct species from that of Italy. There are two species of worms, the country worm and the annual; the latter was brought either from Italy or China, and its produce is better in quality than that of the country worm. Mulberry trees abound to a great extent in India. The mulberry trees grow in some parts of Coimbatore, and might be extended to all. A wild silk is found on the north-eastern frontier; it is wound, and made into cloth for domestic use; it has not been considered worth the attention of merchants here, and it is very inferior to the cultivated kind.

The cultivation of the mulberry and the production of the cocoons are almost entirely confined to the natives; sometimes they are raised by the same, but generally by distinct parties. The Company make advances to those who supply the cocoons; the prices are settled subsequently to the delivery of the silk or cocoon; and the sellers do not know them at the time of delivery. Silk varies in quality according to the season in which it is produced, the best is in the dry and cold season; but the quality chiefly depends on the reeling. To carry the production of silk to any advantageous result would require a very large capital; the silk filatures are expensive establishments, and have a great deal of building connected with them. The silk is at present produced by the ryots, but the Company have been at a large expense in building filatures upon an improved construction. The cocoons purchased by the Company are in general reeled at the Company's filatures by natives. The machinery is on the Italian principle; very simple, and made at the Company's factories. The Company have eleven or twelve filatures in Bengal; none in the Lower Provinces. Gonatea silk is the best; Bauleah the worst. In some districts there are out-factories. The silk districts have since 1827 been divided into circles, in consequence of the competition of the residents in the different factories to obtain the largest quantity. The same price is given for the silk of the same circle, whatever the quality may be; some parcels are perhaps two rupees a seer worse than others. The Company's residents are paid by a commission, said to be two and a half per cent., on the quantity supplied. They fix the prices to be given for the silk. They are allowed, after they have supplied the Company, to purchase on their own account, and act as agents for others. They are not good judges of silk; there may be some who understand it, but in general they are quite ignorant of silk. The business of collecting and managing it practically devolves upon the head native of the establishment.

For filature silk the natives have adopted the Company's mode; for piece goods they reel the silk differently, into putney silk, which is quite of a different nature. The native mode of reeling is by the hand. The Company frequently buy the silk reeled by the natives. The attention of the natives is directed more to the quantity than to the quality of the article they produce, in consequence of the great demand of the private trade. A certain portion of material, if wound into superior silk, will not produce the same quantity as if wound into silk of an inferior quality. The principal faults of the Indian silk are its foulness, unevenness, and want of staple. To improve it, there is required greater attention in cultivating the mulberry, in rearing the worm, and in the reeling and manufacture of the article. The raw silk of Bengal has deteriorated in quality lately. The quantity exported has increased since 1824, owing to the opening of the trade; the duties also have been diminished. There was a rise in price from 1824 to 1827, gradual, and considerable, but the produce of India did not increase in the same proportion, which it would have done if the trade had been free from the Company's interference. Mulberry land has risen in rent, but generally speaking, land has risen little or nothing. The zemindars are interested in the monopoly, as they obtain higher rents in consequence of the Company giving higher prices. The actual producer is not benefited in proportion to the increased price. Under a different

Crawford, 1880

Saunders, 1966.

Bracken, 262
Sullivan, 4768
Saunders, 1972

do 1976

do 1978

do 2010

Bracken, 259

Saunders, 1982

do 1991.

do. 1959.

do 1987. 1984

do 1986 2048

do 1986

do 2030

do 2034

do 2054

do 1995

do 1996

Saunders, 2008

do 2063

do 2059

do 2038

Saunders, 2078
do 2068

do 2071

do 2073

do 2077
do 1981

Gisborne, 1148
Saunders, 2080

Ritchie, 1316
do 1262, 1292
Bracken, 266

MacLaine, 1629

system,* silk would be produced at a much lower price, and the producer be as well paid. Good silk can be produced for less than half the average price of the Company's investment in 1826, and for one third less than it was in 1815. If Europeans were to engage largely in the cultivation, the quality would be improved; but they would not enter into it without greater security for their property than at present exists. It might be rendered equal to average Italian, and in some cases equal to good Italian. Bales of East-India silk have been sold realizing nearly the same price as that which, at the same period, the best Italian obtained. Relatively speaking, considering the quality, the Company's silk and that of the private traders have sold equally well; but the Company's is in general of a better quality, and consequently sells at a higher price: greater attention is paid at the Company's factories; and the natives at theirs care more for quantity than quality. If the private trader were allowed to produce silk in Bengal, as he now produces indigo, his silk would be as good as the Company's. The indigo and silk cultivation could be conducted together profitably. The Company's investment is made for the European market. The export to England is almost entirely in the hands of the Company. The shipments of raw silk to England, in the six years 1823-1828, increased 35½ per cent. over the preceding six years; while the Company's investments increased in the same period only 17½ per cent. There is no native silk in Bombay. The Persian and Chinese silk have not improved. There has been an increased importation into Bombay of raw silk from Persia, and there is a great consumption of coarse silk at Ahmedabad. Silks are now imported into India from England; they are subject to a trifling duty.

An experiment has been made to produce silk in Java, but it has not yet become an article of export; the experiment promises to be successful, some samples have been thought nearly equal to China silk. The mulberry grows luxuriantly, and the worms were imported from China and Bengal. At present there is great difficulty in reeling the silk, machinery has been lately introduced from China; and the difficulty at present experienced may be easily overcome.

Cotton.

Bracken, 281
Gordon, 818

Ritchie, 1324

Gisborne, 1054

Ritchie, 1336

Gisborne, 1136

Ritchie, 1332
do 1271

do 1311 1355

The Indian cotton is not yet sufficiently good to vie with the American. The importation has fallen off, from the competition of the American market. The cotton of the Company's territory is the worst that comes into the British market; that of the islands of Seychelle and Bourbon is the finest in the world. The Surat cotton, with reference to American, is short stapled; it is very dirty, and latterly it has been much injured by the natives in adulterating it with water and sand. It is probably fifteen per cent. below the common American cotton in value; a great part of the difference arises from the difference in point of cleanliness. Between the cleaned Bombay cottons and the best cleaned American upland cottons, there would be a difference in value of from ten to fifteen per cent. There is a real difference in the intrinsic value of the article, independently of any skill in the management. Indian cotton is much inferior to the lowest kind of American, from shortness of staple, and from being much more dirty. The defect in the culture has not been remedied, the dirtiness has been partially remedied by great care in the selection, when Europeans have purchased it. The Surat cotton is in general only applicable to the coarser manufactures of England, but it is becoming a much more useful cotton in our manufactures than it was; it is now mixed in spinning the finer cottons, and it is more generally used in the mills of this country. If the quantity could be increased, it would materially interfere with the consumption of the low American cottons. The improvement required in Indian cotton is the introduction of different seed, and a more frequent changing of seed, as well as much greater attention to the cultivation. It is not sown in drills as in America, but broadcast; there is no care taken of it afterwards, except to keep the cattle out of it. The introduction of a cotton of which the wool adhered with less tenacity to the seed, would, if practicable, be a considerable improvement.

The cotton plant at Bombay is almost entirely an annual, a green seed and short stapled.

Cotton

* With respect to the mode in which the Company interfere with freedom of trade in silk, see p 640, 641 of this

Cotton is not considered as a matter of primary importance in the cultivation of India; rice, wheat, and grain generally, are considered as the most important objects of Indian husbandry, and cotton a secondary one.

The ordinary cottons cultivated are for the most part the coarsest, because they are the most easy to rear; the finer varieties are very rare, because the people have not skill to keep them up; they are in fact delicate plants in comparison. The Indian cotton is short in the fibre and strong in the staple, coarse, and always very dirty. No improvements have been made in the cleaning of it. The seed adheres very closely to the wool, and it is very difficult to separate. India is capable of producing cotton for the European market, provided there is a proper application of skill and capital to the production of the article, in the same manner as in other countries; but the unaided skill of the natives is incapable of doing it.

Cotton is never cleaned with the saw-gin. Bombay cotton may be as clean as any American, by picking it clean from the bushes originally. The machinery does not affect the cleaning of it. The machine is only used to take away the seed; it must be picked clean. The greater part of the dirt is leaf and sand as well as seed, left in by carelessness or design. In May, 1830, the Government published regulations to prevent the adulteration, and it has become comparatively clean, though there is no improvement in the cotton itself. It has consequently risen in comparative prices. But prices generally have been lower since that time. If individuals possessing capital would engage in the cultivation of cotton, it would be their interest to bring the cotton in the best state to market, and there would be no need of regulations. It would be picked cleaner if it were picked separately as the pods became ripe.

The attempts to improve the cotton have not succeeded. In some of the experiments the cotton deteriorated very much; in others the seeds did not come up well. There has been no improvement in cotton since the introduction of the free trade. It was better in 1818 and 1819 than it is now. The Company have taken very trifling measures, not worth mentioning, to improve it. There is no doubt that it would be improved by greater skill being employed in its cultivation. There is no reason in the world to suppose that the cultivation of India might not be considerably improved.

The cotton is obtained through the medium of the natives. It is brought by them to Bombay, and there purchased by Europeans. There are many natives who can be trusted with those transactions. It is purchased by sample, and every bale examined; where the deterioration went to a great extent, it was necessary to examine every bale in two or three places, it was so falsely packed. No confidence was to be placed in those who brought it down. Very rich natives are engaged in the trade who would not adulterate, but their underlings would.

Europeans do not superintend the actual growth of cotton, but they make advances to the ryots. Europeans have no share in the culture of it; it is entirely carried on by natives. No extensive attempt has been made by Europeans to cultivate it. The Europeans who deal in it have merely the collection of it, and perhaps the further cleaning of it after it comes into their possession, and the packing of it for export.

No lands producing cotton are in the hands of Europeans. If Europeans were permitted to settle, farms for the production of cotton might be cultivated; but as far as they have gone yet, Europeans have not been successful, and they have had fair trials. Very superior cotton has been produced, but it did not pay. The cultivation is too expensive. In two or three years the cotton deteriorated. The superiority was owing to the introduction of new seed; it would be possible to improve the cotton by the constant introduction of new seed, but it would not pay. It is not likely to be improved but by the introduction of European skill and capital. It might be materially improved if it were more in the hands of Europeans.

When European agents are employed in the cotton districts they are paid five or three per cent.

Crawford, 1855

do 1862

Ritchie, 1330

do 1310

do 1397

do 1341

do 1365

do 1296.
Bracken, 104, and
Ritchie, 1359
Gordon, 818
Bracken, 281
Crawford, 1855

Ritchie, 1404

Bracken, 86
Gisborne, 1049

Ritchie, 1366
do 1368

do 1383
do 1386
Gisborne, 1177
do 1086

Ritchie, 1402

The Indian cotton could not be sent to England unless it was compressed to a much smaller compass than it is when purchased from the natives. A screw-press is used at Calcutta; at Bombay there are hydraulic presses.

Ritchie, 1261

The machine for cleaning cotton used by the natives is a small hand-gin, or wooden cylindrical machine; it has been used from time immemorial, and is the same as that used for Sea-island in America. They dislike the adoption of our machinery. The machinery by which the cotton is cleaned is very inferior; it costs 6d.; it is turned by hand; cleans the cotton very rudely, and with great loss of labour; it requires no strength, but occupies the whole time of one person. The cotton requires subsequently to be cleaned by a bow-string, which breaks it to pieces. An American machine might be fitted up for about £5. The natives have no prejudice against any such machinery. The Hindoos buy flour from the Strand Mills at Calcutta, where it is ground by machinery. The Government made a trial of American machinery for freeing cotton from the seed, but it was not successful; the machinery ground up the seed with the cotton. Surat cotton adheres strongly to the seed, much more strongly than the American.

do 1343
Gordon, 829

At 5d. the Surat cotton pays a fair profit; at 4½d. it might answer as a matter of remittance; at 4d. money would be lost by it. The price in Bombay is almost as low as it can be cultivated at. The freight is £5. a ton, about 1d. a pound, at which rate the usual description of free-trade ships can afford to sail.

Ritchie, 1314

do 1389

do 1394

Gordon, 611

do 799

do. 835

The Company's investment of cotton at Madras is procured by means of Commercial residents, principally from Tinnevely. In 1823 the investment was 8,000 bales of 250lbs. It is sent to Madras, and thence to China. In the custom-house tariff the cotton of Madras generally is valued at 100 the candy. Tinnevely cotton is valued at 120. It is remarkably good, compared with other Indian cottons; it is the best, except Seychelles and Bourbon. The cultivation can be extended considerably, and improved considerably.

Bracken, 281

Crawford, 1873

do 1855

There is a particular kind of cotton in the neighbourhood of the Silhet hills, equal to any in the South Sea Islands, but it is at present of very limited cultivation. Cotton has been tried in Saugur, but the expense was so great in protecting it that it failed. There is no cotton cultivated by Europeans in Bengal, except as an experiment. The province is unfit for the cultivation of cotton; it requires great skill and attention. It is extremely liable to depredation; a whole cotton field might be plucked in the course of a night, where there are no fences, and little protection from such depredation. There is a fine variety in the neighbourhood of Dacca; it is cultivated by the natives alone, and is not at all known in the English market, nor in that of Calcutta.

Ritchie, 1301

The general opinion is, that the fine specimens of Sea-island cotton cannot be grown at any distance from the sea; the bare circumstance of planting the seed in the high lands ten or twelve miles distant from the sea, is sufficient to deteriorate the quality immediately. The finest of the China cotton is produced near the sea-side. A village near Mangrole, in Kattywar, called Labarcoire, produces a small quantity of very fine cotton: it is cultivated entirely by natives. It is said that it cannot be much increased. It appears to be only grown in one particular spot; it is near the sea-coast.

do 1349
Willey, 2312

The best Indian cotton is grown in Guzerat. There is a large quantity of cotton grown in Cutch, but not in proportion to what might be cultivated. It is particularly fine in the staple, and well cleaned, much better than any that is grown in Guzerat.

Sullivan, 4768

do 4784

A large portion of the cotton of Coimbatore has always been taken by the Government, sometimes by agency, sometimes by contract, which, though nominally open, is in fact a close contract. Some Coimbatore cotton has fetched a high price at the Company's sales. As it grows upon the poorest soils, the produce may be carried to any extent. It is principally exported to China by the Company. Only a small quantity of it is now sent by way of Madras. It used to be collected at Coimbatore; thence sent 180 miles by carts to Palamcottah, where it was screened; then thirty miles to the coast of Tinnevely; there sent by boats across the surf to Madras; re-embarked at Madras, and again sent across the surf, and kept there until the arrival of the China ships; then re-shipped across the

the surf for China. This occasioned a great increase of price, and has caused the abandonment of the trade.

Cotton is now taken in payment of revenue.

The Pacha of Egypt has been manufacturing cotton-twist by European machinery. It is a low-numbered yarn, strong, but very unequal. The speculation is not likely to pay. It was not liked by the natives.

In working up the cotton-twist imported from England, the natives make use of no machinery but that to which they have been accustomed; they do not use European machinery. A cotton-mill has been erected at Calcutta, for spinning yarn. It will require to be very well and very economically managed, to answer.

The consumption of cotton is increasing very rapidly in this country. It amounts to 15,000 bales a week at Liverpool. Indian cotton was first imported in 1790, and United States cotton in 1791. The total export from all India, in 1827, was 68,411,015 lbs.; the value of which, at 25s. per maund of 80 lbs., would be £1,068,922. The importation of American cotton has increased from about 19,000 lbs. to 294,000,000 lbs.

(With regard to the Company's interference with the freedom of trade in cotton, See pp. 654, 655 of this paper.)

Wool.

THE wool of the Cutch sheep is particularly long in the staple, though not fine. It is principally exported to Persia for the making of carpets. A gentleman conversant with the wool trade in London, has stated that wool of that sort is much wanted in this country. It will make excellent blankets, carpets, and other coarse articles.

Tobacco.

EUROPEANS never engage in dealings in tobacco. They are not permitted to engage in the inland trade. It is produced extensively in the northern districts of Bombay, and throughout those territories, of very fine quality. One bale imported sold higher than any American; it sold at 6d. when the latter was 5d.; but the average of an experimental exportation was found to be defective in the curing, and did not pay. It did not fetch above 1d. or 2d. It is of a different description from the tobacco of North America, and approaches more to the Brazil, the thin-leaved tobacco. If it were properly cured, it would answer as an article of exportation from India to Europe; but it is difficult, from its great delicacy, to bring into the proper state; the slightest particle of green vegetable matter left in it, heats it on the voyage. All the importations of tobacco from Bengal and Bombay have been failures. There is no impediment to individuals making the experiment of improving the culture. The tobacco lands of Guzerat are the cleanest and best-farmed lands. Tobacco is the most valuable product of the land in Coimbatore. It is consumed in Malabar, where, from the moisture of the climate, it is next to a necessary of life.

Sugar.

EUROPEANS do not enter into the immediate cultivation of sugar; they purchase it generally in the bazaars, and they make advances to the ryots. Europeans do not engage in the culture and manufacture of sugar in the same manner as they do in that of indigo, because the manufacture of it requires a much greater dead stock than indigo does, and a great outlay at first. With respect to indigo, the outlay is annual, and the buildings are comparatively of small value. With respect to sugar, a large extent of country would be required under the control of an European, and he would have to construct very expensive and substantial buildings, and to erect machinery at great cost. The machinery now used in the East-Indies is very inferior to that in the West-Indies; but within these late years one or two sugar-mills have been sent out from England to India. The machinery is of the lowest description possible, merely a kind of wooden hollow cylinder to receive the cane, with a large post in the middle of it, which is pulled round by a bullock, and squeezes out the juice. There are no large sugar plantations in India. The quality of the

Ritchie, 1398

do 1281

Gisborne, 1032

Ritchie, 1286

Crawford, 187

do 1368

Wilkey, 2286

do 2293

Bracken, 122, 106

Ritchie, 1421

Sullivan, 4768

Bracken, 86

Gisborne, 1115

Bracken, 11

the

- the sugar is complained of, and stated to be very inferior to West-India. The first process of expressing the sugar from the canes is managed by the person who grows it, and he takes it then to a second party, by whom it goes through another process. It could be grown to any extent, and if capital were applied, the quality would be better; but it is doubtful whether there would be any immediate change; the sugar-cane itself in India, from bad management, is not equal to the West-India sugar-cane. There would be no impediment to obtaining any extent of land for sugar, as the present cultivator would be as well disposed to sell or let his field for sugar as for indigo. There is also a great abundance of land at present unoccupied; and if the cultivation of sugar and other articles of export were considerably increased by an outlay of capital, and the application of European skill, there would not of necessity be any diminution in Indian produce as applicable to the food of the natives. The quantity of sugar exported has rather increased, but its quality is so inferior generally to West-India sugar that it cannot be brought into competition extensively with it; the grain is inferior, and it is much less perfectly freed from impurities in the manufacture. The sugar-cane is as good in Bengal as in the West-Indies, and some of a superior quality has been produced, after undergoing an additional process in the manufacture; but it was generally at a cost too high to make it a profitable remittance. If European machinery were used in its manufacture, it might be materially improved. The improvement of sugar is not likely to be effected by any other means than the employment of European skill and capital. The Company have made many attempts unsuccessfully.
- Gisborne, 1056
- do 1086
- do 1177
- Gordon, 619
- The manufacture of sugar could not be carried on under a system in which the government took half the gross produce; it requires too much capital.
- Gisborne, 1063
- Rickards, 2830
- Ritchie, 1416
- Sullivan, 4768
- do 4785
- Petition from London Merchants, March, 31st 1841
- Report 1830-31
- Bracken, 250
- Sullivan, 4768
- 5075
- The Bengal sugar is very considerably inferior to that of China and Siam: the Chinese are more skilful than the Bengalese in the manufacture. The soil and climate of Bombay and Madras are suited to the growth of sugar; but no sugar is produced for exportation in Bombay. The sugar-cane is grown in almost every village, but it is not made into sugar. There is no manufacture there; it is imported from Bengal, China, Manilla, Mauritius, and occasionally Java. The sugar-cane is common in Coimbatore, and sugar in a rough state, called juggaree, is exported by sea from Coimbatore.
- Bengal sugar pays a duty in England of 120 per cent. on the gross price, which, after deducting freight and charges, is equal to 200 per cent. on the proceeds in England.
- Coffee.
- THERE have been many attempts made by Europeans in the cultivation, but they have invariably failed. The Bengal sun is too powerful. An experiment has been tried, of planting the plantain-tree between the coffee-trees for shade, as the plantain has a very broad leaf. The cultivation of coffee has been tried to a very considerable extent in Coimbatore, and found to answer remarkably well.
- Rice.
- Gisborne, 1066
- THE exportation of rice from Bengal has increased very much within the last three or four years, to five times its former amount; principally owing to the invention of some machinery for freeing it from the husk after it arrives in England. It used to come with a great deal of dirt and much broken in the grain, and very inferior in colour to the American rice; whereas now, by coming in the husk, it arrives with the grains unbroken, and can be cleaned in this country so as to look as fresh and bright as the American. There has also been a reduction of duty. If it could be cleaned in India as it is in Carolina, it would be brought in greater quantities. In 1829, the export from India of rice in the husk amounted to 1,000 tons, in consequence of being cleaned in this country by machinery better than by hand in India. In the husk it pays double freight, as it occupies double the space.
- Gordon, 2253
- Cochineal.
- do 632
- THE cochineal insect is collected in the Southern Provinces of Madras. It is very coarse and

and inferior as compared with that of Mexico. It was first introduced by a surgeon on the Madras establishment, about thirty years ago. The price of cochineal has fallen one-fourth from what it was ten or twelve years ago, caused perhaps by the lac-dye; but the imports have materially increased, which may have tended to its decline. None is imported from Bengal.

Gisborne, 1081

Lac-Dye

Is imported in considerable quantities. It was discovered by some Europeans who were in the interior of India. Stick-lac is the gum, with the insect, or the egg of the insect in it, from which the lac-dye is made. The dying particles are separated from the gummy particles, and the gum made into shell-lac. Lac-dye is used in the dyeing of scarlet cloths, as a substitute for cochineal, but it is not adapted for the finest dyes. The lac is employed very much as a varnish. Stick-lac used to be imported into Great Britain in considerable quantities. It is much more bulky in that state than as lac-dye.

Gisborne, 1074

do. 1164

Paper.

THE paper manufactured in India is very coarse and inferior. The Baptists' missionary factory at Serampore is the only paper manufactory.

Gordon, 2235

Gold.

GOLD has been found on the Nellherries, and is collected of a pure kind, and in some quantity, in the district of Wynna immediately below the mountains.

Sullivan, 4769

Copper

HAS been found in the North-western Provinces of India.

Bracken, 350

Stone.

THERE are many stone quarries.

do. 329.

Iron.

Iron ore is abundant in most parts of India. It is worked by the natives, especially at Salem. At Ramnad it is sold at a higher price than British or Swedish iron; it is more pliable, and adapted to many purposes for the natives; but there is great waste in working it, and it is therefore expensive. The native-manufactured iron is very inferior to the English, owing to inferiority in the mode of manufacture. In the neighbourhood of Burdwan there is a quantity of exceedingly fine iron ore, but the better kind is found on the Madras coast. It is not easily converted into steel, but when made the steel is remarkably good. An establishment has lately been set up near Madras, by Mr. Heath, as a regular iron-foundry. He has introduced European machinery. He has an exclusive privilege of manufacture till the end of the charter. The iron is very superior to any in this country, and even to Swedish. Iron ore is found in great abundance immediately upon the frontier of Malabar; it is remarkably cheap in Coimbatore. The iron of Cutch is particularly fine; its ore possesses about 22 per cent. of iron, from 10 to 12 per cent. more than common iron ore. It is found principally on the surface; the natives gather it in baskets, and burn it with charcoal. The finest steel in India is made in Cutch, and the natives fabricate armour, sabres, &c. They are the best blacksmiths in Asia; their horse-shoes are particularly fine, and far preferable to those in England, being more malleable, and not so liable to break. The iron mines might no doubt be worked with advantage, if the Government gave encouragement.

Gordon, 2258

Bracken, 322

Sullivan, 5033

do. 5035

do. 4768

do. 5031

Wilcey, 2281

Coal.

THERE are large mines in a district called Burdwan, 130 miles from Calcutta, now worked to the extent of 14,000 or 15,000 tons annually. They were first worked about fourteen years ago, but they have not been in extensive operation more than six or seven years. They are situated on the banks of a river, connected with the Hooghly

Bracken, 301

- Bracken, 330 The bends of the river increased the distance from Calcutta to between 200 and 300 miles. There is only one season in the year in which coal can be brought down, as the river is shallow except during the rains; at that time 300 or 400 boats make three or four trips. The mine is extensive and of good quality; the seam is nine feet deep, and about ninety feet from the surface. From 2,000 to 3,000 people are employed. There is only one European in charge. The natives work well as miners; they receive from 6s. to 8s. a month; the overseers more. The coal is principally used for steam-engines, and is sent for that purpose to Singapore; it has also been lately applied to the burning of bricks. The Company use it extensively in their public works, the marine and mint departments. It is delivered in Calcutta at 20s. the chaldron; ships from London and Liverpool often take coal, but not in a large quantity, and sell it at from 30s. to 40s. The natives had never sunk shafts; they use it very little indeed as fuel in Calcutta and the Upper Provinces; in the Upper they use cow-dung and in the Lower Provinces, wood; the latter is sold in Calcutta at 32s. for 8,000 lbs. The jungle is regularly cut for the purpose. Europeans have begun to use coal for culinary purposes. Coals are also found in Bundelcund. In most parts of Cutch coal would be found in abundance. The Cutch coal ignites more quickly than the English; and from the superior quality of the gas it contains, it would answer for steam machinery better than the coal which is generally used in this country; it would not encrust the flues of the engines as British coal does; it burns to a white ash, and is rather rapid of combustion, but not so rapid as to exhaust itself in a very short space of time. It has not been used in the public works at Bombay. It is found about thirty miles from the sea; probably during the monsoon it could be brought down the river. The coal mines might no doubt be worked with advantage if the Government gave encouragement.
- do 350.
Wilkey, 2264
- Report on the Coal,
2290

Steam Engines, &c.

- Bracken, 304 ARE increasing in India. The navigation from Calcutta seaward has been much improved by steam-boats. The tugs take ships out with great facility in one or two days; formerly a vessel was perhaps a fortnight in going from Calcutta to Sangur, in consequence of the detention arising from strong tides and freshes.
- Gordon, 2233 Several steam-engines have been introduced into Bengal, almost exclusively in the neighbourhood of Calcutta, for pumping out docks, making and pressing paper, watering the roads, boring cannon, coining, grinding flour, spinning, weaving, and printing cotton. The flour mills are very extensive; the undertaking is new, and like most new undertakings not considered profitable. The machinery for spinning cotton has scarcely commenced its operations; lookers-on of course considered that the property was not promising.
- do 2237
do 2239.
- do 2241 The scarcity of fuel and the absence of falls of water are obstacles to the establishment of extensive machinery for manufactures; but it does not require many favourable stations to supply a large extent of country.

Roads, &c.

- Gordon, 803 It may be said that there are no roads or bridges whatever in the Madras territory. None exist beyond the town of Madras; the rivers are usually crossed on rude rafts of split bamboo and earthen pots. In Coimbatore the roads are remarkably good; there are very few parts of India where they are so. Great efforts have been made to build bridges, and form roads, but very little attention has been paid to keeping them up; a road and a succession of bridges have frequently been washed away in one monsoon. A few small bridges have been constructed by Government in Coimbatore; two most magnificent bridges have been built across the Caverry by a native, named Ram Sammy Moodeliar. The roads in Bombay have been much improved of late.
- Sullivan, 5083
- do 5041
- Ritchie 1532
Gordon 1014 The rate of travelling by dawk is about 1s. a mile, besides a small gratuity to the bearers at the end of each stage.
- MacLanc, 1741 There are beautiful roads from the one end of Java to the other; the cost is paid out of

of the revenues of the island, which are considerable; and the natives are obliged to give so many days' labour. The Europeans have made roads on their own estates.

Some old canals have been lengthened by the Government of India, but nothing more has been done. Such works are usually executed at the public expense, with money advanced from the public treasury; private capital might be so employed with great advantage. Madura depends upon artificial irrigation; the tanks are under the care of Government, and are in the worst possible state of repair. The whole system of cultivation is by irrigation, but there is no work for the purpose deserving of particular notice. In all parts of India irrigation might be carried, by a proper expenditure of capital and skill, to a much greater extent than it now is. There is a large field for the application of capital in economizing the water; many improvements might be introduced. Mr. Gordon's assertions with regard to the means of irrigation are not correct; one of the greatest works for irrigation perhaps in the world is the Anicut; it was not built by the Company, but there it is deserving of notice. The Company have built in Tanjore, in various parts, sluices and aqueducts of very great importance, and have materially improved the irrigation. The most minute attention is paid to the keeping of the channels clear, and to the promotion of irrigation by every means. Nor is it correct to say that dry land is of no value; in Tanjore and Rannad it is of great value. The irrigation of the land is in almost all instances conducted by the capital of the Government, but Coimbatore forms an exception: there the wells are made by the ryots' own capital. The large works, dams, and tanks, are effected by money from the public treasury; but the great sources of irrigation are the wells constructed by the ryots themselves. In the Deccan there are very few tanks, but there are very many wells and other means of irrigating lands. Many of them were in a state of decay, and several have been restored by the British Government. In the Ceded districts of Madras, a large expenditure took place annually for the repair of tanks; wherever they are considered necessary, they are always made, with a view to the revenue; and Government are never backward in making advances for the purpose. Where there is sufficient population to make the means of irrigation available, the cultivation might be much extended by applying a portion of the revenue to the increase of irrigation. Coimbatore is intersected by rivers, from which canals are taken off for irrigation; these, at a comparatively small expense, might be so prolonged and enlarged as to make a canal communication from one end of the province to the other, and to connect the eastern and western coasts.

Sullivan, 5037

Gordon, 553
do 805
do 565

Sinclair, 4233

Sullivan, 4729

Chaplin, 5280

Sullivan, 4768.

Indian Trade.

THERE are five or six large and old established commercial firms in Calcutta; twelve or fourteen have been established since 1815. The general business carried on by such houses is agency and banking in all its different branches: they advance money for commercial purposes; and they act as consignees of goods shipped from London and the outports. The mercantile transactions of Calcutta extend to China, all parts of India, America, France, the Persian Gulf, to a small amount to Holland and Denmark, and a very little to South America; the trade to the last country has fallen off much of late years. The commerce of Calcutta has increased very considerably, owing to the greater facilities afforded since 1813, by the opening of the trade.

Bracken, 4

In 1813-14 the Imports were	...	£2,120,000	Exports	£5,390,000
1827-28	...	4,150,000	...	8,730,000

The proportion carried on with Great Britain is about seven-tenths of the whole; at the opening of the trade it was about five-tenths. The principal imports of late years have been cotton piece-goods and twist, metals (spelter or zinc is now very largely imported), woollens and wines, particularly sherry, which was a novelty in the Indian market. The spelter is of the same quality as tutenague, but not quite so good; the latter was chiefly imported from China, but the importation has now ceased; it is used

with copper and tin for making pots, pans, and cooking utensils; they are generally made up in India, but some have been fabricated in this country, and have sold very well; there is scarcely a native that has not one such pot, and also a large plate or platter of the same material. The staple articles of export from Bengal are indigo, sugar, saltpetre, and at one time cotton, but that has fallen off very much, and raw silk. There is a large trade in grain with the Isle of France, which is almost entirely supplied with rice from India. There are a very great number of native houses carrying on foreign trade; the native merchants consist of Parsees, Hindoos, and Mahomedans. It is not the custom for the principal European mercantile establishments to have a native partner, but there are often native partners in particular speculations in the principal houses. The Parsees are the most intelligent; they are for the most part free from the prejudices of caste, and frequently embark as supracargoes, principally for China. The natives are much given to commercial pursuits, and well qualified to succeed in them. They are sufficiently commercial to answer the highest expectations that can be formed with respect to trade between the two countries, but our local institutions must be greatly altered before they can become prosperous, so as to admit of an extensive commercial intercourse. Trade cannot be much increased unless the condition of the natives be bettered, so as to give them the means of paying for imports. There has not been much prosperity among the native merchants of late; they are not so rich as they were; they were immensely rich. The opening of the free trade of India has generally extended the commerce with that part of the world; Calcutta has been principally influenced by it. It has injured the re-export trade, for Calcutta was previously a sort of emporium, but it has greatly increased the import and export trade. The country shipping interest has suffered; the competition of British ships having injured it. In 1814 ships were chartered at £25 per ton, now at 30s.; the price of cotton was 1s. 3d., it is now 5d.; of pepper, 1s. to 1s. 3d., now 3d.

Rickards, 2748.

For 10 years from 1794, the American trade with Bengal averaged :

	Exports	...	£464,357	...	Imports	£390,606
In 6 years from 1802-3, all India	...	1,154,494	...	..	1,247,920	
In 3 years from 1808-9	...	1,705,814	...	...	1,627,612	

do 2753

It was said that the increase was owing to the state of war, and that it would fall off in peace; it did not fall off till a double duty was imposed on the neutral trade with India. In 1793 private merchants were partially admitted into the India trade, but the forms and restrictions were such as to be attended with much inconvenience; yet the imports from India by privileged traders were in 1793-4, £187,710, and in 1811-12, £1,169,023. The Company's prognostication of the evils to result from the opening of the trade has not been verified. It is impossible to deny that the trade has vastly increased since 1793; that the increase embraces a great variety of articles formerly unknown or not used in India; and that the Company never have carried this trade, and never could carry it, to the extent of which it is obviously susceptible; there would not have been such an importation as there has been of British cotton twist, if the Company's monopoly had continued. In sixteen years the Company's trade has only averaged £1,882,728; the private, £5,451,452. The private trade is, therefore, five* times as great as the Company's, which proves that the Company have not carried the trade to its fullest extent; that private traders are much more fit for extending the commercial intercourse with India; and that no definite limit can be placed to the extension of that trade, if our institutions abroad allowed wealth to increase among the natives. The extended and extending† consumption of British manufactures among the natives is to be

Gisborne, 1021.

Rickards, 2753.

do. 2758.

* The one sum is not quite thrice the other.

† For the extent to which our manufactures are used among the natives, see Rickards, 2820, 1317; Willey, 2296; Sullivan, 5102; Gisborne, 1142, 1026; Ritchie, 1531; Gordon, 410; Bracken, 18. And for the interference thereof with the native manufactures, see Sullivan, 5104; Rickards, 2853; Gisborne, 1038, 1142; Bracken, 18, 34; Ritchie, 1262.

be ascribed to the circumstance of our manufactures and staples being perfectly suited to the wants and tastes of the natives, who will assuredly use them to the utmost extent of their means; to the great cheapness of the British articles consequent on the use of machinery; and to the opening of the trade in 1813. If greater facilities were given, a continued extension of the trade would go on, provided that those facilities were coupled with a salutary reform of the revenue and judicial regulations; for commerce with a wretchedly poor people can only be carried to a limited extent. The freight outwards is, on dead weight, 20s. to 30s. per ton; on light goods, £2 to £3: homewards, about £4, and from £5 to £6. This freight has continued for so many years, that there is reason to suppose that the ship-owners must find their advantage in the voyage. The freight paid by the Company for the regular chartered ships, taken up for five voyages, is 20*l.* or 21*l.* At the freights formerly paid by the Company, and at the present prices in England, it would have been impossible to have imported cotton wool, sugar, saltpetre, &c. The obstructions which still impede the extension of the Indian trade, are the forms and restrictions imposed by law on persons and ships proceeding to India, the Company's interference with the trade, the China monopoly, and, the greatest of all, the poverty of the people. The shipping of this country has since 1823 been allowed to carry on the coasting trade of India, but vessels must first clear out from England for one of the Presidencies: ships of a smaller burthen than formerly can now proceed to India: vessels of two hundred and fifty tons or less are the most convenient size for Singapore and the Eastern Archipelago, and often better suited to the means of persons carrying on the Indian trade. Cargoes arrive in as good a state in a small vessel as in a larger: the rate of freight is the same, and the expense of sailing is less. Europeans procure European articles at a much cheaper rate than they did formerly, and the natives obtain better prices for their produce. The free trade has introduced into India new articles of commerce, especially spelter and cotton goods. At the opening of the trade, Calcutta exported to London two millions sterling of cotton goods, and now it imports two millions sterling of British cotton manufactures. Since the opening of the trade many drugs and dyes have been exported from Calcutta which were not exported before. The articles imported into India by the private trade are all kinds of cotton and woollen goods, copper, lead, iron, spelter (to a considerable extent), glass, earthenware, and other articles suitable to Europeans, in more limited quantities. The returns are in sugar, rice, indigo, coffee (not much from Calcutta), saltpetre, cotton, silk, lac-dye, shell-lac, and pepper.

The first import of cotton-twist was in 1823; in 1824 it was about 121,000 lbs.: in 1828, 4,000,000 lbs. From 1814 to 1824 repeated attempts were made to introduce it, but without success, the price being too high for the natives to purchase, and it was also supposed that it was not fitted for native use. There would not have been such an import if the Company's monopoly had continued. There was no great quantity imported before 1824 or 1825. The value of the importation in 1827 and 1828 was about £100,000; in the following year it increased considerably; in 1829-30 it fell off; but the average of the three years, 1827-8, 1829-30, was about £230,000.

The import of British white and printed goods into the countries east of the Cape was in 1815, 800,000 yards, and in 1830, 45,000,000.

The value of the imports of cotton was, in

1829, into Calcutta	...	£655,462	Bombay	...	...	£570,626
1830, —	...	798,756	—	...	...	618,174

The principal obstacles to the extension of commercial intercourse between Great Britain and India, are the want of returns more suited to the markets of Great Britain, and the bad quality generally of the products of India. If the cultivation were more extensively in the hands of Europeans, those products would be very materially improved. The commerce of Madras has not increased in a similar ratio to that of Bengal. The foreign trade of Madras is not considerable. There is no good harbour along the Coromandel coast. The staple products of export from Madras are cloth, salt, and chanks; the

Rickards, 270*l.*

do 276*l.*

do 277*l.*

do 277*l.*

Gordon, 410.

Gisborne, 1018.

do. 1021

Bracken 34.

Gisborne 1173

Ritchie, 1236

Gisborne, 1084.

Gordon, 410

do 594.

(Commons),
1830, 1830-1, 1831

Ritchie, 1228.

the cloth to most countries; the salt to Bengal only. There is also an export of mineral alkali, called caramutti. The commercial intercourse between Bombay and the United Kingdom has increased very considerably since the opening of the trade. The principal articles of import into Bombay are metals, woollens, cottons, and cotton yarn. In 1816 the consumption of British cotton fabrics was very trifling; there was only one Indian merchant in the bazaar at Bombay in the habit of dealing in British piece-goods, and there was much difficulty in disposing of an investment. The low price at which they can now be afforded from this country has caused the consumption to become considerable, aided to some extent by the pains which are taken to adapt them to the wants of the natives; they are made to imitate exactly similar native goods. British metals are very largely imported into Bombay. The first import of spelter was in 1822; previously, tutenague, a finer description of the same article, was imported from China; that is now driven out of the market. The European manufactures imported into Bombay are principally consumed at the Presidency, Surat, and other large towns; latterly, a considerable quantity has gone to Malwa, in return for opium; much is also carried up the country; and there is a large export to the Red Sea and Arabian Gulf, principally to Bushire. The returns are principally bullion, and latterly silk in large quantities. A great deal of the silk has of late years, in consequence of the reduction of duties, been re-exported to England; but there is also a great consumption of coarse silk at Ahmedabad. Silks are now imported into India from England; they are subject to a trifling duty. In 1823, in the southern parts of Persia, the bazaars were filled with British manufactures, principally printed goods; the northern parts were supplied with German and French productions: the latter are comparatively much dearer. In 1819 and 1820 there were no British manufactures in Malabar and the internal provinces of the southern part of India; they had scarcely reached so far, and they were at that time much dearer than they now are.

do. 1238.

do. 1242.

do. 1292.

and 1262.
Bracken, 266
Ritchie, 1242.

do. 1497.

In Bombay nine per cent. is the interest, and Europeans lend their money at nine; but the interest with mercantile houses is only five. One per cent. commission is charged, not on the loans, but on the account generally. The rate of interest is lower than in Bengal, because there is not so much employment for money: a good deal of the Bombay capital is employed in Bengal; the profits of trade are smaller and more steady. No advances are made for agricultural purposes.

Ritchie, 1526.
do. 1538.
do. 1318.

The export of Chinese articles generally from Bombay to the Deccan, and the export of metals, has decreased of late years, in consequence of Poona having ceased to be the seat of a government. The returns for British manufactures are made to Great Britain in produce of all descriptions, in bullion and bills; and by sending produce to China, such as cotton and opium.

Gisborne, 1088.
Ritchie, 1509.

There have been considerable fluctuations: but upon the whole the India trade must have been profitable, from the immense increase that has taken place. Since the opening it has been a source of gain, but probably not to a very large extent.

Gisborne, 1181.

The Company have made very considerable remittances of specie to this country of late years. Private merchants have also occasionally, but not at all extensively, resorted to the same means.

Ritchie, 1520.

Gisborne, 1154
Ritchie, 1514

No alterations are necessary for the trade between England and India, except the giving greater facilities for making returns from China, and taking off duties and the internal imposts. The India trade would be considerably increased by throwing open the China trade. It might be increased if the power of obtaining returns were greater; the absence of proper returns is the chief impediment to its great increase. At present the Indian markets are rather glutted. If there were proper returns to be sent, English manufactures could be sold all the cheaper for the profit made on those returns. A perfectly free intercourse between Bombay and China, and between China and Great Britain, would add facilities to the commercial intercourse between Great Britain and India.

do. 1442

Crawford, 1848

The trade has increased beyond all expectation. It is susceptible of still greater increase;

crease; a free introduction of capital, enterprise, and skill, under proper protection, and just and equal laws, would facilitate the increase. The difficulty of finding adequate returns necessarily follows from the obstructions to the application of capital to the soil and to the industry of India generally. The products of India might be considerably increased and improved.

There is a great want of specie in India, owing to its being made a principal medium of remittance to this country; this may be ascribed to the increased exports from Europe to India. If the products of India saleable in this country could be increased in quantity and value, the inconvenience to India from the drain of specie would be remedied. The ryots in the Bellary district have required that the revenues should be taken in kind.

Sullivan, 4979

do 4951

Comparing the duty in England with the price of many articles of Indian produce, it will be seen that the former is in many instances exorbitant; and a grievance common to all such articles is, that they can only be imported into a few of the ports of the United Kingdom, and cannot be removed thence (as goods from other countries can) without the duties being first paid. The evil is threefold; the trader is obliged to advance a capital of from 100 to 400 per cent. above the cost price, before the articles can be distributed for general consumption; the price to consumers is enhanced by the profit on the employment of a capital twice or five times as large as would otherwise be necessary; and the enhanced price operates as an incentive to adulteration.

Petition from London Merchants, March 8, 1831
Report 1830-1

The present scale of duties on East Indian goods shows a variation from less than one per cent. up to 400, on the present value of many important commodities; on some minor articles the duty varies from one to 1,000 per cent., and in one trifling instance the duty is 3,000 per cent. Such a scale requires revision, equally for the benefit of the revenue and the encouragement of trade.

Petition from London Merchants, March 31, 1831
Report 1830-1.

The use of British manufactures might be greatly extended, if greater facilities were afforded for the returns of this country; all lowering of duties would tend to that effect, but what is principally wanted is the improvement of the quality of Indian articles.

Gisborne, 1176

British manufactures pay on importation into Calcutta two and a-half per cent. Indian manufactures pay on importation here a very high duty. If the duties in England were repealed, there would still not be a considerable import of Indian manufactures into England. The trade between India and England is limited by the heavy duties on some articles, particularly sugar* and silks, and to a certain extent, cottons.

do 1185.

If the India trade were left to the Company and the natives, it would dwindle away.

Bracken, 281

do 279

The insecurity of persons and property is the principal impediment to the growth of the trade of India. Private individuals cannot export arms and ammunition to the East: consequently those articles are chiefly supplied by Americans at Sumatra, Cochin China, and Siam.

Gordon, 469.
do 495.

The commercial intercourse between Bengal and Madras is one of export of grain from the former, and salt from the latter; but the monopoly interferes with the export of salt. It answers to import salt from England, notwithstanding what was intended to be a prohibitory duty. The salt imported into Bombay is sent from Madras, none from Bengal, in consequence of the cheapness of the Madras salt. Duties are levied between one presidency and another, as between foreign states. At Calcutta the rates of pilotage and mooring charges are very heavy; on the Coromandel coast there is no pilotage, but the anchorage is heavy on small ships. There is unnecessary delay in obtaining clearances.

do. 139. Forbes,
2421, 2435 Mill, 111
Gordon, 465
Mill, 4129
Gordon, 471

The

* Bengal sugar pays a duty in England of 120 per cent. on the gross price, which, after deducting freight and charges, is equal to 200 per cent. on the proceeds in England; p. 630 of this paper.

(Commons),
1830, 1830-1, 1831
Stewart, 2461

The duties in Ceylon are very heavy. If a more free commercial intercourse were allowed between Ceylon and the various parts of India, it would tend greatly to the advantage of both countries. It is usual for ships coming from India to touch at Ceylon, and the trade is certainly much impeded by the high duties. There is a considerable export of grain and rice from Bengal and the Malabar coast to Ceylon. The population is to a great extent dependent upon the foreign supply, as rice is their chief food, and very little is produced in Ceylon itself.

Crisborne, 1000

The effect of free trade in Java was a very extensive demand for British manufactures, cottons (white and printed piece-goods), woollens and metals. From Java the returns to this country are coffee, sugar, rice; and sometimes to Calcutta, tin, japan, copper, and spices.

Maclaine, 1570

do. 1835.
do. 1570

Java carries on trade with the neighbouring islands, China, British India, Straits of Malacca, Europe, and America. The trade has increased considerably of late years; in 1828 the amount was three millions. The trade with the Company's possessions is considerable. There are no obstructions in the way of it. Articles of European manufacture are extensively consumed in Java, cotton piece-goods, iron, steel, glass, &c. The cottons are obtained from Belgium (not Holland), Great Britain, British India, and China. The first importations of British manufactures took place in 1814-15, about the commencement of the free trade. The largest importation was in 1823, amounting to 6,000 cases of British cotton goods, each case being valued at £50. From 1814 to 1821, the duty was 15 per cent. upon the invoice; afterwards there was an *ad valorem* duty of £26. 5s. This turned the scale in favour of Belgian goods, but still a great quantity of British goods was imported. If it had not been for that duty, the consumption of British goods would have doubled. The greater part of the British goods imported are white, and are afterwards dyed by the Javanese according to their tastes. Attempts have been made by the dyers here to imitate them, but not very successfully. In consequence of the facilities given to calico-printers by the recent repeal of the duty, their future attempts may be more successful. The Javanese have a coarse and substantial, but high-priced, cotton manufacture of their own. They formerly imported a large quantity of the cotton fabrics of Madras and Bengal. In consequence of the opening of the trade, the fabrics of Madras, being of a finer description, have been almost superseded by the introduction of European goods, but the coarse cottons of Bengal are still introduced largely into all the Malay countries. Upon the cotton goods of India imported into Java there is a duty of 15 per cent. upon the invoice; and the duties upon the other productions of India are equally low. English twist is sent to Java and woven there, but not in large quantities; not in such large quantities as to other parts of the East. About 3,000 tons of European iron are annually consumed in Java; both British and Swedish are used, but the latter is preferred. It is taken in an unwrought state, and fabricated there: a very small quantity of wrought iron is imported. Very little of that metal is produced in Java itself. The island is supplied with unwrought copper from Japan, and wrought, such as copper sheathing, from England. About 600 chests of opium are imported: in 1820 three-fourths were from Bengal, and one-fourth from Turkey; in 1829 three-fourths were Turkey, and one-fourth Bengal. The revenue derived by the Dutch from the monopoly and import duties is about £262,536. The monopoly increases the price from 600 to 800 per cent. In 1828 the other customs amounted to £225,405. The staple articles of export are coffee, sugar, rice, spices, tin, tobacco, indigo, sumac, and hides. Coffee is rather on the decrease; it is in great part a monopoly of the government; it is not of a very high quality. The government coffee is superior to that produced by natives; inferior to that cultivated by European planters. The cultivation of sugar is on the increase; there is a large field for the increase, if there were a foreign demand. In 1828 rice was extensively exported; 26,000 tons to the neighbouring islands, China, Europe, the Isle of France, and a small quantity to the Cape. The export of indigo was, in 1828, only 24,000 lbs.; in 1829, the production of the island was 152,000 lbs., and it is rapidly increasing, attributable chiefly to the encouragement of government. Some Chinese attempted the cultivation of it very successfully: the principal planter

do. 1835
do. 1581.

planter is a Chinese. Some samples were equal to fair Bengal, but owing to the chests being packed very unevenly, the buyers had little confidence in it: its being a new article was also against it. Tobacco is exported very largely, between 1,300,000 and 1,400,000 lbs., worth £4,000; consumed chiefly in the neighbouring islands; a small quantity is sent to Siam and the Cape: the cultivation is in the hands of the Chinese. Spices are exported, but they are not grown in Java; the value of the export is £50,000. The production of Banca tin amounts to 2,000 tons, worth in Java about £100,000. Spices and tin are monopolies. A portion of the Banca tin is brought to Europe. An experiment has been made to produce silk, but it has not yet become an article of export; it promises to be successful; some samples have been thought nearly equal to China silk. The mulberry (the white and the Persian) grows luxuriantly. The worms are brought from China and Bengal. At present there is great difficulty in reeling the silk; machinery has been lately introduced from China: the difficulty may be easily overcome. Several experiments have been lately made in the cultivation of tea, cochineal, and cocoa. Tea has been introduced with good success. The commerce of the country is chiefly carried on by the Chinese; they are a more alert and active people than the Japanese; as merchants, they have much more enterprise and intelligence. The Chinese settlers trade extensively with the Eastern islands, with the Malay Peninsula, and also with Europeans. There are also settled in Java a considerable number of Arabs and Armenians. The Arabs are not equal in intelligence and enterprise to the Chinese; they are not so liberal in their dealings; a matter of business which would occupy an hour with an Arab, would be settled by a Chinese in a few minutes. The Javanese themselves are becoming more provident. There is a commercial association, in which the king of the Netherlands is the principal partner. It carries on a considerable part of the external commerce of Java. It has exclusive privileges, but the trade carried on by the company is not profitable; the opium branch is the only one that is profitable to them. The company has been very unfavourable to the general interests of trade in Java, by glutting the market with injudicious shipments from Europe.

Maclaine, 1646

There is a very considerable import and consumption of British manufactures in the Philippine Islands. The imports are chiefly cotton goods, iron, and steel. A considerable quantity of sugar is manufactured, and indigo, but of a very inferior quality. Hemp is an article of export, and is of good quality. Tobacco is extensively produced; it is exported in very large quantities in a manufactured state; it is considered to be the best tobacco in the East; it is a government monopoly. The manufacture of cigars is entirely conducted by women; about 5,000 are employed in Manilla. There is a considerable commerce between the Philippine Islands and China, carried on by Chinese junks, American, Spanish, and Portuguese ships. The chief articles of import are tea, Chinese piece-goods, and provisions; of export, tortoise-shell, mother-of-pearl, and rice in large quantities.

do 1785.

Immediately after the last Charter, the Company made a speculation in claret, which appeared to be undertaken without due consideration of profit to themselves, and solely with a view to injure the private trade. It was a new article of commerce with them, and some of it did not fetch the prime cost. The Company are not good traders; no sovereign ever traded to advantage. The separation of the Company's two characters of merchants and sovereigns, would be attended with incalculably good effects, not only to the natives of India, and the merchants there and in this country, but also to the Company themselves. It is stated by the Company that they are under the necessity of carrying on what they call a remittance trade from India to this country; but such remittance would be infinitely better conducted through the medium of private trade than by the Company themselves, even to a larger amount than they require for their political payments in England. It is incalculable to what extent the trade between this country and India might be carried, if the Company went out of it, and a fair scale of duties was established by parliament. The Company ought to carry on no trade either from India to China, or from India to Europe. It would be much more beneficial to the country generally, and to the native population in particular, if the Company were to surrender

Forbes, 2342

Gordon, 642
Forbes, 2345.

do 2374
Stewart

their character of merchants in India, and confine themselves to that of sovereigns. Commerce would be carried on with much more confidence and vigour, particularly on the part of the natives. The practice of Government trading on its own account is very injurious to the private traders; it almost annihilates them. It is quite impossible for an individual merchant to compete successfully in the market with those who exercise sovereign power in the territory where the trading goes on. Although there is no forced delivery, the natives who raise the produce are influenced in giving the Company a preference in the purchase, by a fear of displeasing the ruling authorities. If a private merchant go into the market early in the season to purchase cotton, the growers will not sell, or make a bargain with him, until they know the extent to which the Company wish to purchase. They are no doubt influenced in a considerable degree by the hope of getting a better price from the Company, but also in a very great degree by the fear of offending the Government by selling their cotton before they know whether the Company require it or not. It is generally thought by the mercantile community of Calcutta that it is impossible for a large company and government together to act well as merchants, for it is found that the prices of all commodities in which they interfere are driven up to rates which make them unprofitable to those who deal in them; and the monopoly in some branches of trade, such as silk, altogether puts an end to the dealings of private merchants. The effect of the Company's purchasing for remittance is to raise the price of an article in India and lower it in England. The injurious effects of the union of the two characters of sovereign and merchant, as well to the true interests of the Company themselves as to that of individuals, are illustrated by the treatment of Mr. Wilkinson in the manufacture of saltpetre; also in their conduct with regard to Malwa opium, and cotton for China. Trade cannot be profitably conducted by a government without the unjust and impolitic advantages of a company; and a government trade in concurrence with that of private merchants,* must not only be attended with a waste of the public revenue, but be liable to come into unequal competition and injurious collision with the operations of individuals. It is expedient to divest the Company, while exercising any of the functions of government, of the few commercial establishments which still remain to them.

Gisborne, 1090
do. 1147.

Gordon, 2231
Forbes, 2313

Petition from Calcutta, Report, 1831

Rickards, 2846,
2853,

also Gordon, 743.
Rickards, 2851.

do. 2855

Bracken 65.

Previously to 1811, the Company's investment of piece-goods was provided under a most rigorous and oppressive system of coercion; the weavers were compelled to enter into engagements and to work for the Company, contrary to their own interests and inclination. Sundry regulations have been passed since that period for correcting the system, but they never can be effectual so long as there exists the present system of power and commerce united. Where the Company have ceased to trade, the natives have been comparatively free from oppression. The Company also would be great gainers by the entire abolition of their own trade; for while they would gain as sovereigns, they would also be saved from the heavy losses which are inseparable from their present commercial operations.

In the event of the British Government in India being relieved from all their commercial functions, there would be no inconvenience experienced in remitting the territorial revenue to England for political purposes; it might be remitted in good bills; if it can be remitted now under the existing restrictions, it would be more easily remitted when the trade became free.

Commercial houses discontinued their engagements in the production of raw silk, in consequence of the difficulties arising from the competition of the Company's commercial agents, which rendered it a hazardous speculation. But the Company's agents do not now possess any peculiar advantage over the private trade, as the regulation which gave it to them has lately been rescinded. If the Company were to cease altogether to carry on trade in silk, the silk trade of India would increase under the exertions of individuals, for the mode by which the Company transact their business enhances the price very considerably; they

* See effect of the Dutch Company in Java, p. 639 of this paper.

they do not enter into it as a mercantile speculation, but as a mode of remittance. Whenever it is known that the commercial resident of the Company is in the market, the price is raised beyond what an individual would think it prudent to give; the Company's agent is not so much influenced by such considerations, and he complies with the price affixed. The Company must in many instances, in sugar and silk, have sustained heavy losses. At present, the native weaver benefits by the prices which the Company give, because he gets a higher price than it would probably be worth the while of an individual to give; but its tendency is to limit the demand for that production of the country. The reason why Europeans do not engage largely in the manufacture of silk in Bengal is, that the Company engross the whole of the silk districts, and private merchants have therefore not entered into the trade; they are not placed upon the same footing, as they have not the same power. Mr. Watson, a British-born subject, had considerable filatures, but the Company built factories close to his, by which means they took the whole of the cocoons and the produce of the districts round him: his silk was equal to the average quality of the Company's. Other persons have been compelled by the conduct of the Company's servants to abandon their factories. An application coming from a house in the silk trade, for a person concerned in that trade to proceed to India, has been refused by the Company. The native growers and producers of silk who had received advances from the Company were prohibited from selling their produce to other parties, even when the advance was small. Advances have been forced upon them. It is the practice of the Company's agents always to keep the silk-growers under advance. Orders were issued in 1829 for establishing an equality between the Company and private merchants, but they have not altogether had the effect, although the Company's monopoly is in some places broken through. The condition of the weavers and people engaged in the culture of silk, is that of persons constantly in debt, under advances from the Company; and it is the system of the Company to keep them in that state. The private merchant is obliged to make his prices depend on those of the Company, and therefore cannot tell what he will have to give till the Company's prices are known. In a review of the external commerce of Bengal, printed in Calcutta, it is said, "The trade in Bengal silk, both in its raw and manufactured state, has been almost entirely engrossed by the Company; or, at least, that portion which falls to the lot of private individuals has been so much enhanced in price by the powerful facilities of the former, that as an object of commercial gain it is impossible to stand the test of competition." It is difficult to foresee the result which is likely to crown this system of unprofitable traffic, pursued with so much avidity by the agents of the Company, who being remunerated in proportion to the quantity of raw material provided, have at once the power of crushing all private enterprise, and by setting up a strong competition among themselves, have raised the prime cost to the double of what it ought and might be. The consideration of personal gain has plainly introduced the most fatal consequences, and will ultimately lead to the total annihilation of so valuable a branch of Indian commerce. It would be judicious on the part of the Company, who are merely maintaining their exclusive traffic to enrich their servants, to prefer farming out their filatures to private enterprise, when the Company might purchase the produce in the bazaar at one-half of what it now costs them, and it would then constitute a solid medium of remittance to Europe, whilst it now forms but a hazardous speculation.

With regard to the cotton investments for China, great inconveniences and injury to the interests of the private merchants on the western side of India, arise from the Company going into the market to purchase cotton; the period of their doing so, and the quantity they require, being quite uncertain; inasmuch that the cotton-growers and dealers will fix no price, nor enter into any contracts with private merchants, until they ascertain whether the Company are or are not to come into the market. As soon as the Company have made their engagement, for 20,000 or 30,000 bales perhaps, the price of what remains of the crop immediately rises, sometimes to an exorbitant sum, and the private merchant is obliged either to go without his investment, or to submit to purchase the article at a price which ultimately makes it a losing concern to him in the market of Canton: it is nothing uncommon for a rise of ten, fifteen, or twenty per cent. to take

Ritchie,

Saunders 1998

do. 2022.
do. 2089
do. 2013

do. 2015, 2010

Gordon, 2232.

Saunders, 1634.

do. 2053

Forbes, 2321.

place in the course of a few days. The purchases of a large capitalist merely would not produce the same effect, because he would have only the advantage of his superior capital; but the Company bring into the field their weight as sovereigns. It is perfectly well known, that when the Company announce that they require a certain quantity of cotton, the growers and dealers look upon themselves as bound to supply it. It is impossible for the Company to lay aside, in their mercantile dealings, their character of sovereigns, so long as it is united with their character of merchants in India; it is also an unprofitable mode for the Company, as the accounts exhibit a heavy loss on the trade between India and China. The growers of cotton have been subject to oppression on the part of the Company's servants, from the system of being compelled to take advances, and deliver their cotton; it may not be the practice at present so much as it used to be. Private traders also make advances, but at the great hazard of never getting cotton in return: there are no legal means by which a merchant in Bombay can compel a grower of cotton in Guzerat, or any district out of the Company's dominions, to fulfil his contract, while the Company's name and authority are all-powerful in India.

Bracken, 206

do 222
Gordon, 638, 620
Gisborne, 1150
Gordon, 623.

The Company's agents have a great deal of influence in their situation over individuals, independently of the command of funds, though that command is probably the most material. They are not skilful and economical agents. They have little or nothing to do. The commercial resident at Tinnevely had, in 1823, only to furnish 8,000 bales of cotton: the annual charge of his establishment and commission is £5,000. They have been occasionally employed by other persons to act as agents. They carry on trade on their own account, and act as agents for private merchants, charging fifteen per cent. for so doing, in consequence of the advantages which they derive from acting as magistrates, and being able to dictate the price. For similar agency two and a-half per cent. is charged at Calcutta, and five per cent. at Madras.

do. 2157

At Bombay there is no bank; at Madras there is one, entirely the Company's, which receives deposits, discounts bills, and issues notes; the notes have no currency beyond the town of Madras. At Calcutta there is one, a joint-stock company, with a charter, of which the Company hold one-fifth share. There are also four private banks; the latter have applied for charters, and have been refused, because the Company are anxious to monopolize the trade in money. In the Company's bank the original stock was £500,000, and one share, 5,000 rupees; a share is now worth 10,000 or 11,000. If the other banks were chartered, it is probable that their profits, under private management, would be greater than those of the bank directed by the Company, and administered in a considerable degree by the Company's officers *ex officio*. The notes pass among the natives as specie, without discount. They circulate beyond Calcutta among Europeans and private persons, but they are not receivable in the Company's treasuries beyond Calcutta. The amount of paper money in circulation is estimated at half a million. The notes were very coarsely executed on thick paper, and with common letter-press; but it is understood that copper-plate notes on thin paper have been since prepared. The commerce of the country would immediately employ paper money to the amount of 50,000,000, if banks in India were on the same footing as they are at present in England. The natives as well as European capitalists would place confidence in European banking establishments, not entirely from the personal character of Europeans and the integrity of their dealings, but also from their connection with England. If a good system of banking were established in the interior, so that money could be borrowed at a low rate of interest, it would be advantageous to the community; but there is no part of India where banking establishments do not exist conducted by natives. In Poona, and many parts of the Deccan, there are shroffs or sahookars, who have correspondents all over the country, so that in most of the large towns bills of exchange can be obtained on any part of India. If natives accumulate capital, they generally bury it; there is no place where they would feel disposed to deposit; a bank might be of use. Under a free intercourse, provincial banks would be among the first undertakings of Europeans. The establishment

do. 2173
do 2179
do 2173
do 2175
Chaplin, 5234

Sinclair, 4380
Gordon, 2153.
Sullivan 4728

ment of banks would tend to encourage industry. There are native bankers in all the provincial towns, and money-changers in every village. They discount bills at as high a rate as five per cent. per month in small dealings. There is only one chartered bank in Calcutta, that of Bengal; the shareholders are only responsible to the extent of the capital. There are two other banks; one general bank, to which there are many subscribers, and that of Hindostan, with which Alexander's house is connected; the smallest note they issue is for four rupees. The notes circulate as far as Chaudernagore and Serampore, twenty-five or thirty miles; but they do not circulate in the villages to any extent. Any bank can issue notes. The banks pay interest on deposits, two-and-a-half and three per cent. on such as are liable to be withdrawn at a moment's notice. The rate of discount varies from six to twelve per cent. Houses of tolerable repute had their acceptances discounted by the bank of Bengal, at seven per cent. The circulation of the private bankers is very limited. The issues of the bank of Bengal are about eighty lacs. In that bank there are private proprietors; Government hold three hundred shares. They do not execute the Government business; the Government use no bank. The advantage which the bank of Bengal has over private banks is, that as far as Benares their notes are received in payment of the revenue. The impression among the natives is that the Government is responsible for the bank. There are no banks in the interior issuing notes. There are native bankers, called shroffs, principally engaged in discounts; they issue bills of exchange, called hoondees, of which there is a large circulation; they are generally drawn at fifty days; sometimes they are for so small a sum as nine rupees; the inland business is principally so conducted. The great banking houses in Benares have branch establishments in almost all the native cities; and a very large business is conducted by hoondees. There is a stamp on bills of exchange, but it is much evaded. The provincial bankers are almost entirely natives. There are no banks in Bombay; the circulation is entirely bullion (silver). Banking establishments issuing notes are not required, as there is more money than the mercantile world in general can employ. In Coimbatore any quantities of hoondees may be obtained, and for a large amount; the traffic in bills is very considerable; all the great houses in Bombay have agents there, and bills can be obtained upon any part of India. These shroffs have established themselves within the last ten or twelve years. The interest of money now is from eight to twelve per cent.; it was sixteen, eighteen, and twenty.

China.

THE disputes in 1829 arose from a desire on the part of the factory to ameliorate the condition of foreign commerce, which was very much embarrassed in consequence of the reduction in the number of Hong merchants, and of the impending failure of one of them, Chunqua. After a five months' stoppage of the trade, six of the requests made by the factory were conceded: 1. All fees on the creation of Hong merchants abolished. 2. The elder Chunqua ordered down to Canton. 3. A reduction of the port dues according to measurement. 4. Compradores' charges reduced. 5. Hong merchants to be no longer responsible for each other's debts. 6. Payment of the import duties to be altered. Prior to the last proposition, the duties on the import cargo were not demanded sometimes for many months after a ship arrived, as they were only collected in the month of October: the proposition was that they should be paid in five instalments. The delay in the payment had the bad effect upon the merchants who were poor and had little capital, of inducing them to speculate upon the certainty of their not being for some time called on for their duties; they bought large cargoes, and added to their embarrassments. The Chinese decision was that the duties should be paid in three weeks. The debts for which the Hong were mutually responsible were entirely due to foreigners: no distinction was made in the payment between Englishmen and Americans, or other foreigners. Manhop, one of the Hong, who became bankrupt in 1828, failed for about 1,500,000 dollars, due to Europeans, and to the government for duties. The payments made by the Hong on account of their bankrupt brethren, in 1828 and 1829, amounted to 668,894 dollars; and they paid on a similar account in four previous years,

Bracken, 197.

do 227

do 211

Ritchie, 1505.

Sullivan, 5114.

Plowden, 3605

do 3748

do 3619,
and 3679

do 3655

do 3663

do 3623

do 3643

do 3653

(Commons),
430, 1830-1, 1831

Plowden, 3812

do 3823

do 3830

do 3628

do 3633

do 3664

Jones, 2734

Blair, 2622

do 2677

Jones, 2741

Blair, 2642

L. 18, 2732

do. 2740

Blair, 2660

Petition, dated
4 Decem 1830;
522 of Report
of 1831

years, about 1,200,000. The releasing the Hong from their mutual responsibility is a serious blow to the private trade. The release, and the reduction of the time for paying the import dues, are injurious to commerce in general; but it is also injurious to the general interests of trade that foreigners should deal to any great extent upon credit with the natives. The motive of the factory in recommending the 5th proposition was, to relieve the Hong from embarrassment; but the principal cause of their embarrassment was injudicious speculation in trade. The factory invariably interfere when they are applied to for any debts due to Englishmen. The chief Hong merchant, Howqua, generally undertakes for the other Hong merchants the management of the claims of foreigners; he brings his list to the chief of the factory, states that such sums are required to be paid on account of foreign claims, and knowing that large sums are about to be issued from the Company's treasury in the course of their current transactions, begs that they may be withheld in the treasury; but this has always been resisted by the factory, and has only been done on the Hong merchants, to whom the Company's money was due, consenting that it should be paid to Howqua. The Chinese government refused to allow foreigners to hire warehouses, and keep them under their own management; and they also refused to abolish the practice of security merchants.

The principal cause of the threats of the Chinese, in September, 1830, which led to an armed force being sent from the Company's ships to the factory, was the protection given by the British to three Parsees who had killed Captain MacKenzie, a British subject, commanding a ship under Dutch colours. A jury, composed of foreigners and Englishmen, had sat on the body, and brought in a verdict of justifiable homicide. The Parsees were sent to Bombay. If they had been given up to the Chinese they would have been considered by them as murderers. Another cause of the threats was, the residence of the wife of the President in the factory, which was not customary, and is obnoxious to the Chinese. In consequence of the example, American women came and were ordered away, but did not go, though the American trade was stopped. The trade of only one ship was stopped, and the other Americans interfered and caused the ladies to be immediately sent down to Macao. During the discussions with the factory there was no interruption of the trade. If the lady had been the wife of a private individual, the trade not belonging to the Company would have been stopped.

There has been a reduction of port charges to the extent of 600 or 700 dollars upon each ship. The compradores, the men who supply the ships with provisions, have the benefit of it; as their charge is as high as formerly. It does not appear that there is any reduction on the measurement.

The principal commercial disabilities to which private British merchants in China are subjected are these: English ships were formerly admitted to trade at various ports, Amoy, Limpo, and the islands of Chusan and Formosa; now the entire foreign commerce is restricted to Canton, where the exorbitant harbour dues operate as a virtual exclusion of the smaller class of shipping, while the privilege of dealing with foreigners is confined to ten or twelve licensed native merchants; the oppressive conduct of the local authorities is such that respectable and wealthy men cannot be prevailed on to accept the privilege; and as foreigners are prohibited from renting warehouses in which to deposit their cargoes, there is no adequate competition, nor any chance of obtaining the fair market value of a commodity, an evil the more deeply felt in consequence of nearly all the imports in the year necessarily arriving about the same time. The business of a foreign vessel is liable to be delayed by underlings of the custom-house on frivolous pretexts, for the sake of extortion; the duty on her import cargo is levied in an arbitrary manner, and exceeds by many times the rate prescribed by the imperial tariff, which appears to be in general moderate, but is little regarded in practice. Studied indignities are heaped upon foreigners by the acts of government, and by contumelious edicts exciting the lower orders to treat them with habitual insolence. Free air and exercise are curtailed by precluding access to the country, or beyond the confined streets of the immediate vicinity of their habitations. Husband and wife, parent and child, are separated

rated by the prohibitions against foreign ladies residing in Canton. These evils are attributable to the nature and character of the Chinese government, and not to any want of proper spirit and firmness in the agents of the Company. The influence which the Company has acquired by its extensive dealings, furnishes the strongest evidence of the importance of foreign commerce to the Chinese. In order, however, to place the commercial interests of Great Britain on a fair and equitable footing, a higher authority is required, emanating directly from His Majesty, as a medium of communication with the Canton government, as well as with the Imperial Court at Peking, which would remove the impression prevalent among the Chinese authorities, that foreigners in China have forfeited the protection of their own sovereign. If this course cannot be pursued, the Government of Great Britain ought to adopt a resolution worthy of the nation, and by the acquisition of an insular possession near the coast of China, place British commerce beyond the reach of future despotism.

There is less trouble and annoyance in regard to loading, unloading, and clearing, and carrying on the business of a ship at Canton, than in almost any other port, and more facility is afforded to foreign trade. The customs and duties are regulated between the Chinese merchant and the government, which keeps foreigners from collision. Any irregularities are heard of through the security merchant.

Blair, 2673.

The Hong are generally considered very liberal merchants; so little is there of want of faith in them towards foreigners, that there is often no agreement made with them, except verbally.

Plowden, 3651.

It would not be advantageous to abolish the Hong, unless the whole system upon which trade is conducted in China could be improved. It is sometimes exceedingly difficult for ships to obtain security; all the Hong merchants of respectability decline becoming security, because it involves them in the probability of trouble. The fee paid to the security merchant is from 800 to 1,000 dollars for every ship. He is responsible for the good conduct of the officers, and that the ship shall not be engaged in smuggling transactions, and all other concerns of a similar nature. If any irregularities are discovered, the merchant is fined, and a port clearance refused, and all communication is stopped till the fine is paid, which is generally an arbitrary and most unjust exaction. There has been no instance of a ship absolutely failing to obtain a security merchant, though some have been obliged to go to one of the poorer merchants, and pay him a sum of money for becoming security. The difficulty in obtaining security has increased within the last six or eight years.

do 3665.

The establishment of a Co-hong, or any material reduction of the number of Hong merchants, would prove injurious both to the Company and to the private trade. The factory have always used their endeavours to prevent such a change.

do 3802

The foreign trade of Canton is not an arbitrary system, left to the discretion of the local government, but is in the main grounded upon the instructions of the Court of Peking. It is grounded on the principle of responsibility and security, and is not liable to frequent changes.

do 3771

The British subjects resident in Canton, not connected with the Company, are not exposed to any oppressions or restrictions from the Chinese government, either in their persons or trade.

Blair, 2665

There is no doubt that the situation of foreigners in China is very humiliating and very unpleasant in general. They are confined to very narrow limits, and cannot walk out in the streets without being subject to insult and abuse, being pointed and hooted at. If they go beyond the suburbs of Canton, it is with the danger of severe annoyance and even beating. The language of the Chinese edicts is insulting and offensive. The limits to which they are confined are perfectly understood, and are the same as they have always been; if they remain within those limits they are not insulted, but they cannot go far beyond the factory without being subject to abuse. They are sometimes taken to the

Plowden, 3690

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the houses of merchants in the neighbourhood of Canton, under the protection of the Hong.

Plowden, 3702

There would be no interference on the part of the government or the people with persons going for the purposes of trade, except such interference as is by law established; for instance, being obliged to conform to the security system, &c.

do. 3775

A man delivered to the Chinese government on a charge of homicide, would have no chance of a fair trial. They have, however, severely punished injuries done by Chinese to Europeans, and are desirous of doing justice. It would be extremely difficult to make any arrangement for the trial of Europeans for offences against Chinese, and of Chinese for offences against Europeans; but such an arrangement might be made. The British authorities are at present practically under the necessity of screening the guilty, in order to protect the innocent in cases of homicide. When such a case occurs, it almost invariably occasions a suspension of the trade, and great injury to the commerce of the port. The privilege of open access to the tribunals of the country, and the placing of foreigners on the same footing as natives, would not be attended with any practical advantage to Europeans.

do. 3716

do. 3794

The privilege of having a British representative at Pekin would be obtained with very great difficulty; it would be almost impossible to obtain it. A King's consul would not be productive of the advantage contemplated; the Chinese would not regard the power of a King's consul alone, unless supported by the other influence; it is the great trade of the Company that gives weight to the chief of the Factory. The Chinese government will not receive communications from the factory unless they bear the signature of the Chief and the seal of the Company.

do. 3721

do. 3729

The seizure of an island on the Coast of China, is not likely to be the means of forcing any concession from the Chinese. Nor would it be likely to assist the trade in tea. If the Chinese heard that we had taken possession of an island in their vicinity they would be very jealous, and endeavour to impose restrictions to prevent their junks from going there. The export of tea coastwise in Chinese junks, for the foreign trade at Canton, is strictly prohibited. There still exists a natural feeling of jealousy towards foreigners; there is no change in that respect. There is no feeling on the part of the Chinese authorities favourable to the relaxation of the commercial regulations either of England or China; they have always deprecated any sort of change in the present system. They are aware that it is possible that the present monopoly may not continue, and in conversing upon it, they have always expressed a wish that it may continue. They are not a people that would submit to coercion from foreigners; more might be obtained from civil, firm and decided conduct, than by endeavouring to intimidate them; there is a point beyond which they will not go. No doubt, if an attempt by force were properly conducted and followed up by the Government, it might succeed. Anything to improve the trade would be better done by means of representation and strong remonstrance properly followed up, than by actual force; a representation to the government might have effect. It is much to be questioned whether any reasonable proposition for improvement of commerce from the British authorities in this country, would be likely to produce effect without the employment of force. There are no other means than force that would produce such an effectual change in the system as is desired by the petitioners from Canton. A firm and consistent line of policy will always have the most weight, and is the best mode of dealing with the Chinese; a direct appeal to them would not be good policy.

do. 3700

do. 3731

do. 3697.

do. 3710.

do. 3713.

do. 3718

do. 3719

do. 375

do. 3769

do. 3773.

do. 3705.

do. 3787.

The English in general, in Canton and Macao, conform to the customs of the Chinese, and are not more disposed to infringe them than other foreigners are.

The Russian government have an establishment at [redacted] for the acquisition of the Chinese language, in order to conduct the trade which is carried on at the frontiers, but they have no political agent. They are excluded from the port of Canton, in consequence of their having an inland trade on the northern frontier.

The Roman-catholic missionaries have been dismissed, and only enter China clandestinely.

A considerable portion of the China foreign trade is a smuggling trade; the whole of the opium trade is so; the opium vessels have since 1820 remained at Lintin, outside the port, out of the control of the government altogether, and therefore do not require a security merchant. The American trade is a good deal conducted outside the port; they do not go to Whampoa, but smuggle up their cargoes from Lintin. The Americans generally confined their mercantile dealings to the outside merchants, who are merely shopmen. The Hong, to whom the strict monopoly of foreign trade is by law given, perceiving that the outside shopmen were, with the connivance of some of the Hong, carrying on a large trade illegally with the Americans and others, endeavoured, in 1828, to put a stop to it, by binding themselves not to connive at it; but they broke faith with one another, and the Americans appealed to the Chinese government, by whom the outside merchants were in consequence allowed to trade in a number (about sixty or seventy) of petty articles, the staple articles of commerce being still confined to the Hong. There is no confidence to be placed in the outside merchants, who are not licensed by the government.

The degree in which the monopoly of the tea trade contracts the extent of commercial intercourse with China is very great. The people of England are thus indirectly taxed more than twice as much as they would be directly, if the trade were opened, and the capital stock of the Company (the dividends of which are now paid from the extra price levied on the consumer) were added to the national debt. Of the ships that would then be engaged in importing tea into England, some would take their outward cargoes to India, whence there is at present a difficulty in procuring return cargoes; but that resource and convenience to both countries is, with many others, prevented by the monopoly. Many of the English residents and agents in Canton would be sorry to see the monopoly intertered with; some of the most respectable have stated so. The China trade ought decidedly to remain with the Company; if it be taken out of their hands and thrown open, there will be great danger of losing it altogether. If the trade with China were thrown open, the India trade would be considerably increased; for merchants would have the means, as opportunity offered, of shipping the produce of Bengal to China, which is extensively done now, in cotton, saltpetre, and opium, and having the proceeds of those things re-invested in tea, silk, nankeens, &c. for shipment to England. At present as much as three or four millions of dollars is sent back from China to India; at the same time there is a considerable import of silver into China. The Americans import silver largely to pay for their China cargoes. If a free trade were established, the same ship might carry British goods to India, and be engaged in the trade from India to China, and from China to England. The permission to ship tea from China to Great Britain and other countries would add facilities to the transmission of funds from India to England. The trade between Calcutta and China is on the increase. The articles exported from Calcutta are almost entirely opium and cotton, but the Company now does more largely in cotton than private traders do. The returns from China are almost entirely bullion, and bills on the Bengal government. The bullion consists chiefly of Spanish dollars; sometimes of Sycee silver (native silver of China in masses), but that is smuggled. The returns from China were bullion, bills, and silk, nankeens, sugar, cassia, &c. to Calcutta and India. The bullion and bills went to England in the Company's ships, and the articles were taken to Singapore or India in country ships; no use was made of the Company's vessels. The trade carried on by individuals between India and China may have been the last year or two, a losing one in the article of cotton, but certainly not in the opium.

Plowden, 3806

do. 2723
do. 3673

do. 3677.
do. 3654.

do. 3800.

Petition from
Calcutta; Report
1830.

Plowden, 3795.
Forbes, 2375.

Gisborne, 1155.
Rickards, 2772.

Ritchie, 1443.

Bracken, 294

Ritchie, 1319

Plowden, 3831.

APPENDIX, No. 3.

DIGEST of EVIDENCE given before the COMMONS' COMMITTEE, 1832, on
COMMERCIAL Subjects.

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Digest of Evidence
(Commons), 1832

Simons, 841.

East-India Company's Commercial Establishments and Proceedings in London.

THE Committee of the Court of Directors of the East-India Company, called the Committee of Buying and Warehouses, buy all the goods which the Company export, including military stores, in such way as they can most to the advantage of the Company, but chiefly by public advertisement or circular letter. Some of the stores which do not admit of being purchased by competition are bought of tradesmen, by private agreement; small-arms, and things of that kind, are bought by private bargain; but every thing that admits of being bought by muster is so bought. A special report is made to the Court by the Committee of all purchases entered into, whether by advertisement, by circular letter, or privately. The Company's commercial affairs generally, both at home and in India, are entrusted to the Committee of Buying and Warehouses. There is another Committee for Shipping, and they purchase naval stores and provisions, and manage the Company's ships. The Committee of Correspondence, as the senior committee, occasionally take upon themselves to make purchases of any thing out of the usual way; but this happens but very seldom.

The number of persons employed in the warehouses of the East-India Company in 1832, was 2,547. The expense of the warehouse department was £315,000, under the following heads: for landing and housing goods, dock dues, cartage and materials, such as boards, nails, &c. for warehouse use, £69,000; daily wages, including medical attendance allowed to the men, £160,000; rent of hired warehouses and ground-rents, £24,000; taxes and repairs, £20,000; salaries to clerks and warehouse-keepers, £42,000. These sums are independent of the expense of the department of Buying and Warehouses in the India House itself, and of any rental for the Company's warehouses, which are almost all freehold, or built upon ground belonging to public companies, on long leases renewable on the payment of fines. These warehouses are valued in the Company's books at £950,000, and the expense of the department of Buying and Warehouses at the India House was, in 1827, £13,069, being £3,205 more than its amount in 1817. This increase in the amount of salaries is attributed to the lengthened service of the clerks. No reduction

861
863.

864
871.

872
867
1181, 1184.
857.

tion has been made in the establishment, because, although the commercial exports to India have ceased, the exportation to China has been as large in quantity as it was, and that of military stores much larger. The details of miscellaneous business have also increased.

It is considered that the warehousing business of the Company is conducted at an unnecessarily large expense; that more labourers are engaged than can have sufficient work during the whole year, and that their wages are too high. Those at St. Katharine's Docks receive 2s. 8d. a day for eight hours' work, while those belonging to the Company receive 2s. 9d. a day for six hours, and 3d. for every extra hour, besides 6d. a day extra if at work on indigo, and 4d. a day extra if employed at Blackwall; in addition to which, the men at the Docks are better looked after, more work is obtained from them from a spirit of emulation and a desire of promotion in an establishment where appointments are not governed, as is believed to be the case at the India House, by patronage and influence. At St. Katharine's Docks only 150 labourers are permanently engaged. There is a second class of 250, who are employed when there is work for them in preference to others; and the Company have issued about 1,200 tickets to extra labourers, over and above the 250 preferable men, who, if not otherwise employed, attend at the gates ready for work: when it is known that there is work for them, the average number so attending is between 800 and 900. The expense of the Dock Company in 1831, was 19 directors, £2,950; 78 salaried officers, £13,682; wages for labourers, &c. £49,532; stores and materials, £6,000; fire insurance, £500; rates and taxes, £6,500; repairs, &c., £2,500; incidental charges, £5,000; total, £71,132, including £1,100 for a superannuation fund. To which is to be added £34,000 for interest on money borrowed beyond the capital of £1,352,000. The total outlay on the Docks has been about £2,150,000. The quantity of goods landed, housed, and delivered, during 1831, was 214,000 tons. The quantity deposited in the warehouses on the 1st of January 1832, was 52,000 tons; while the stock of bonded goods in the East-India warehouses is not estimated to exceed 55,000 or 56,000 tons. It is however allowed, that the chief branch of the Company's trade (tea), causes more labour than any article warehoused by other companies. The greatest portion of the increased labour on tea is in the mending of the chests, and the sorting of the various qualities and putting them on show, which is a very tedious operation, and the assortment and sampling require considerable skill; so do East-India goods generally, but such skill may be acquired by other parties.

Private merchants dispose of their goods to a considerable extent at the Company's sales, and entrust the entire management to the skill and care of the Company's servants. The Company's system of management differs very materially from that at the public docks; the latter act simply as warehouse-keepers for receiving and delivering goods; the Company do the same, and in addition sell the goods and receive the proceeds, and in fact become the agents of the importers, a business which the public Docks do not undertake. The warehouse charges of the Company for landing and housing are about the same as those of the Docks. The charges for sale, and receiving and paying over the proceeds, are very reasonable. It is apprehended that they are lower than private commission merchants charge, because no person is compelled to bring his goods to the Company, and yet almost all the valued goods are brought to them. The Company have their own officers in all the public docks in London, where they receive charge of any goods housed there, which the importers are desirous to entrust to the management of the Company. After the Charter Act of 1813, which laid the trade with India open, the continuance to the Company of the housing and sale of Private Indian merchandize depended upon the holding forth such reasonable terms as the public might approve. Schedules of rates were promulgated, which have been varied from time to time to meet existing circumstances, and the periods for sales, &c. have been arranged with the concurrence of importers and buyers. These regulations are understood to be very satisfactory to the public, insomuch that many Importers of Indian merchandize, who choose to deposit their goods in the public docks, still desire to obtain the advantage of the Com-

Hall, 2, 10

2531

2510, 2540, 2541

2502

2528, 2531

2500

2503

2504

2500

2499

2529

2512, 2537

2548

Simons, 1164

1167

1166

1170

pany's system and management, and place the goods under the Company's control as if they were in the Company's warehouses.

Hall, 2514.

2514, 2550.

2515, 2548.

2516.

2543.

2517.

2520.

2522.

2521, 2553

2521, 2554.
Simons, 912.

1240

914, 1263

917, 934, 1240.

919

920, 1246.

The mode of levying rates by the East-India Company is different from that of other dock companies. The Company levy their rates by an *ad valorem* per centage, varying from $1\frac{1}{2}$ to $7\frac{1}{2}$ per cent., according to the tariff of the several articles. The principle upon which the rates of the St. Katharine's Dock Company are calculated is, 1st, with reference to the expense of labour; 2d, the cost of material; and, 3d, the profit added thereto necessary to produce a fair remuneration upon the capital invested. The *ad valorem* rate of charge of the Company is on a great number of goods extremely heavy, whilst on some few it is very low. Since the prices of some articles have been much depressed, about half a dozen of them usually lodged with the Dock Company have been placed under the management of the East-India Company, as their *ad valorem* mode of charge did not cover the expense of working the goods: on the other hand, there are goods, which, being of great value, the rates operate the other way, and the East-India Company have nearly lost the whole of the sale of several commodities, such as cotton, saltpetre, sugar, drugs, &c. which at one period formed some of the chief articles of their periodical sales. The charge on indigo is extremely heavy, compared with what it would be if warehoused and sold by other parties. The St. Katharine's Dock Company would have no difficulty in selling the goods of merchants at periodical sales as the East-India Company do, and at a reduced charge. A prejudice has existed in favour of the East-India Company's management, and sufficient cannot be said in favour of it; but the charge exceeds in many instances the proportional advantage. No attempt had been made till lately to afford similar accommodation to merchants; and the agency houses preferred employing the East-India Company, because they would have had more trouble and responsibility if the goods consigned to their care had been sold by a broker, or any other public company. The St. Katharine Dock Company would, in most instances, deduct one-third from the *ad valorem* rates now charged by the East-India Company, and take such reduced rates as a remuneration for mere warehousing and management, charging for rent and delivery in addition, and assuming the privilege enjoyed by the East-India Company of exemption from the auction duty, which on goods the property of the importing merchant, sold for the first time, is one-half per cent. On indigo, for instance, the East-India Company charge $2\frac{1}{2}$ per cent. upon the value. On a chest estimated at £75, the rate and lot money would be about 32s.; the St. Katharine Dock Company's consolidated rate on the same would be 17s. 6d., to which add for management of public sale (free of auction duty) 2s. 6d. to 3s. 6d. a chest, making the expense, 21s. as compared with 32s., about a third less. The difference would be greater on indigo than on goods generally, the article being of greater value.

The East-India Company have agreed to pay to the East-India Dock Company £30,000 per annum for the use of their docks and warehouses; and have consequently issued directions to compel vessels on board of which goods are shipped on their account to proceed to the East-India Docks to discharge, the object of which compulsion is to fill the warehouses there, and to derive the advantage of the landing and wharfage charges. These directions are inconvenient and expensive to the private trader, who would prefer landing his goods at St. Katharine's Docks; and the arrangement is also productive of charge to the East-India Company, as, in consequence of it, goods arriving in St. Katharine's Docks and placed under the management of the East-India Company, are sometimes sent by lighters four miles down the river again to the East-India Docks.

The Company's broad cloths were, until lately, dyed in London; they are now dyed in the country, and bought in a finished state. The camlets are bought in a dyed and finished state at Norwich. Some are purchased in Yorkshire, but only occasionally, as that kind of manufacture is not so well understood there as at Norwich. The long ells are still dyed in London, because no dyers in the west of England have offered to dye them. The principal colours are scarlet, purple, black, and blue; and the dyeing has, within the last two years, been executed by contract, circular letters being sent to the trade.

trade. Previously to that time the dyers were employed as regular tradesmen to the Company, the business being divided into thirty-six shares, and one dyer having three shares, another two, and another one, as they had obtained appointments from the Committee of Buying, in whose patronage the shares were when vacancies occurred. The prices were fixed annually alike for them all, but some of the dyers who had several shares were subject to a deduction. The prices were fixed according to the price of drugs and the state of the markets. It was a very good business, and generally, but not as a matter of course, descended from father to son. If the dyeing had been performed by contract with one or two houses, it would undoubtedly have been done cheaper, though the dyers always said that it could not, and complained that they were not paid sufficiently.

The Company have ceased to export goods to India for sale since 1824-25: they continued during the early years of the present charter to carry on trade as they had formerly done, on the principles of profit and loss, as merchants. The export goods, consisting principally of copper and woollens, sold at a very good profit; and there was a profit generally to the time the Company ceased to export. In 1826 the Court informed the Bengal Government, that though it would be highly satisfactory to them to be enabled to continue to furnish India, as they had long been in the practice of doing, with regular and ample supplies of British staples, yet that, looking to the great difficulty which existed in obtaining any articles of Indian produce or manufacture that would afford a remittance to London, even at several pence in the rupee below the par of exchange; to the large balance due from the territorial to the commercial branch, and to the extensive supply of military and public stores, then under provision, they had seen it expedient to determine not to export any woollens, copper, iron, lead, or merchandise of any other kind to any of their Indian Presidencies. The exportation of wine to India, which commenced in 1808, arose in consequence of complaints that good wine could not be procured at reasonable prices; the export continued for four or five years, but after the first year or two the trade was very disadvantageous.

The Company's exports to China are reduced in some kinds of goods, and increased in others. In 1813-14 the quantity of long ells and camlets was much larger than it now is; that of broad cloth much smaller. The export of long ells has not been reduced within the last eighteen or twenty years. The total numbers of the articles exported have not very materially altered, but the cost price has fallen considerably; the superfine broad cloth which used to cost £20 is now bought for £10, and lead is now £13 instead of £40 a ton. The exports are in value about two-thirds of what they were. As the Company have the monopoly of the China market, it would seem to follow, that, if they had not supplied it with British manufactures, they would not have been imported into that empire at all, or at least not in sufficient quantities. The Court never contemplated not to supply China, when they ceased to supply India. The exports to China are governed by the demands from the Company's servants there; they annually send a requisition for the next season, which the Court in general exceed. The Company continued during very many years to export long ells to China, knowing they would be attended with loss; they considered that the manufacturers in the west of England who made those long ells had no other trade, and that China was the only market, or nearly so, for such goods. It was computed that the Company's long ells consumed the fleeces of upwards of a million of sheep, and gave employment to some thousands of people in Devonshire and Cornwall, who had no other trade. Long ells have now become a profitable article of trade, owing to the great fall in the price of wool. A change from loss to profit took place in 1829-30 and in 1830-31. There had occasionally been a profit before, but it was greatly overborne by the loss. Broad cloths have been a profitable article of export, and large purchases of them are made in Yorkshire; the mode of buying them and camlets, &c., is to invite tenders by sending circulars to all the manufacturers who will receive them.

The Company are not fairly undersold in any article in the China market, but they cannot

Simons, 922.

926.

932.

1236.

1239

866, 891.

873, 875, 1134

1137, 1138, 1141.

1143

882.

884.

867, 892

997, 999.

1253.

868.

874.

896.

898, 941

996.

907

1234

1267.

1269

1276.

Simons, 905
1259
905
1260.

cannot compete with the private traders in camlets, which are smuggled into Canton. The market is chiefly supplied with camlets surreptitiously introduced; they are not prohibited. Nothing is prohibited in China, except opium, but the duty is very great; it is nearly equal to the cost price in England. The duty is 18 dollars a piece, and the selling price, without the duty, 22. On long ells the duty is more moderate, and there is therefore no inducement to smuggle them, and the Company, consequently, are not undersold, so far as regards that article.

Cabell, 1634

Major Burney, the British resident in Ava, stated that he saw in the market at Madé four or five pieces of broad cloth, which had the Company's stamp attached, and which had evidently been imported at Canton. The head of the caravan said that it cost 2½ ticals a cubit, in the part of China whence they had brought it; but that they could only get at Madé two ticals a cubit for it. He declined separating the piece of lead on which the Company's arms were stamped from the cloth to which it was attached; a proof of the value which the Chinese have for cloth bearing that stamp.

Simons, 943, 1273.

944

954

The leading articles of the Company's exports to China are the same now as they formerly were, that is, broad cloth and long ells; but the Company have exported British calicoes, cotton twist, and a variety of other articles. They do not now export tin; their trade in that article was discontinued in 1816-17; some, however, was sent three years afterwards, but none since 1821-22; it was first sent in 1788. Upon the whole the trade was unprofitable. The Company exported some cotton twist in 1820-21, and not again till 1827-28, when they sent out 90,000 lbs.; in 1828-29 they sent 300,000 lbs.; in 1829-30 the same; in 1830-31, 480,000 lbs.; and they intended to send out the same quantity in the present year, and had bought 240,000 lbs. in part, when information was received from China, that in two districts in the immediate vicinity of Canton, and in another about twenty miles from it, very serious commotions had taken place among the natives at the introduction of cotton yarn; they loudly complain that it has deprived their women and children, who had previously been employed in the spinning of thread, of the means of subsistence. They have resolved not to employ the cotton yarn in their looms, and have expressed their determination to burn any of it which may be brought to their villages. In consequence of this information, the Company do not intend to send any more during the present season. It is also stated that, owing to the detection of a fraud in the manufacture of coarse satins for the Indian market, by using twist of the high numbers instead of silk, it had become unsaleable at Canton, and had been transhipped to Singapore and elsewhere. The first consignment of 90,000 lbs. in 1827-28 was chiefly fine twist, and was sold at a great loss; the subsequent consignments were of lower numbers, and sold at a profit. The net loss on the Company's exports for twenty-six years previously to 1818-19 was £1,668,103; since 1820-21 the export trade has been carried on very much more profitably.

Bracken, 1896.
Simons 962
961

960, 1274

979

*The East-India Company's Commercial Establishments and Proceedings
in India and China.*

Simons 886, 1006
886 1186

1188

Wilkinson 2274

Simons 1192
Mackenzie, 669

Simons 1195

THE commercial establishments at Madras are abolished; at Bombay there is one factory for the provision of cotton to be exported to China. The Company have now no commercial agents in India, except the silk-agents and the agents for cotton and saltpetre; they are selected by the Government from the covenanted servants of the Company who have proceeded to India as writers. In some instances they certainly are not well acquainted with the business they have to manage, because they are occasionally removed from a residency where there are no transactions in some one article to a residency where the whole business consists in that article. They are not such persons as a manufacturer in this country would select to superintend such establishments; but many of them take a great deal of interest in their business, and are by no means above attending to it. They have, until lately, been compensated by a monthly salary, and a commission upon the goods provided by them, but within the last year this mode has been changed, and they are now paid by fixed salaries only. Previously to the year 1801, it seems occasionally to have been

been found that the residents would, for the sake of increasing their commission, enter into engagements in excess of the quantity of goods ordered from their respective factories. In that year Lord Wellesley directed that they should not receive any surplus goods without express permission; and in 1814 the Court limited the total amount of the commission and salary to 40,000 rupees, and directed that the surplus should be carried to the credit of the Company, with a proviso, however, that if an unusually large investment should be ordered, the Government might pay to the resident a portion not exceeding a moiety of the surplus commission. A commercial resident has received £7,000 a year. Mr. Bayley, at Benares, received £9,000, but then he was opium-agent also: his emoluments were as large as those of the highest political officers. The rate of commission allowed by the Company to their servants was considerably less than that paid by private merchants to individuals; it was $2\frac{1}{2}$ per cent., subject to limitation when it amounted to a certain sum. The salaries and establishments have been lately revised. The commercial servants regularly report all their proceedings to the Board of Trade, who exercise a constant superintendence over them. The Board are the functionaries to settle all commercial transactions; they are in constant correspondence with the residents, and, if absolutely necessary, a member proceeds to give his personal supervision at any particular factory. Any points deemed of sufficient importance would be specially reported by them to the Government, and by the Government to the Court. All the proceedings of the Board are recorded, and sent home for the Court's information.

The largest amount of territorial revenue advanced in one year for commercial purposes has been about two millions.

All civil servants, except the commercial servants, are restricted from trading on their own account, and they are under restriction as to agency and partnership. In old times, all were permitted to trade. The distinction between political and commercial servants originated with the Act of Parliament prohibiting any person employed in the management of the revenue, or the administration of justice, from being engaged in trade. The commercial servants are chiefly the commercial residents and the officers of the Board of Trade and warehouses; there are about twenty who are thus enabled to trade; some of them trade to a considerable extent: they were formerly employed as agents to private individuals, but there is now a prohibition against their being so employed. Medical officers, when attached professionally to civil stations, are allowed to trade. Military officers are generally prevented from trading. All Government officers ought to be restricted from trade, and particularly those who trade for the Company ought to be restricted from mixing up that trade with a trade of their own. The captains of the Company's ships always carry on trade on their own account. The Company's officers indiscriminately are allowed to be shareholders in the Government Bank, and there is no objection to such permission.

In addition to ceasing to be exporters to India, the Company have also ceased to be importers from India into England, except of raw silk, some silk goods, and saltpetre from their own factories, and of indigo bought in Calcutta. Orders are now on their way to India to discontinue the provision of sugar. They have abolished all the factories which provided cotton piece-goods; the whole of the commercial establishments at Madras are done away, and at Bombay nothing is left but one factory, for the provision of cotton to be assigned to China. Except as above, the Company have in fact ceased to be traders. Their import of silk bandannas has rather increased, but not materially; the remittance by them is about 1s. 11d. the rupee.

The Company formerly imported from China raw silk and nankeens, but they became losing articles, and the Company discontinued them. At the sales in 1822, the loss on nankeens amounted to 21 per cent. on the prime cost and charges, and the Company therefore directed the supracargoes not to enter into any further engagements for an investment of that description of goods. In 1824 they gave similar directions with regard to raw silk. The sole article they now import from China is tea.

Although

Simons, 120

1209

1212.

Mackenzie, 6

Simons, 849, 1171

1198.

1225

1221

1229

Mackenzie, 68.

669

667.

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Simons 886, 80.

1276

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976.

999

Simons 978, 984
187
188.

Although the Company have found it expedient to discontinue the importation of nankeens and silk from China, the home market has been very largely supplied with those articles by private traders. It is believed that it has been to them a decidedly losing trade.*

1121

The Company export annually to China a considerable quantity of cotton-wool from Bengal and Bombay, and they did so from Madras, until the factories there were abolished.

Union of Government and Trade.

Mackenzie, 214

THE Government of India has quite enough to do in the political management of the country, without having any concern with commerce; and they never have paid, and never can pay, that attention to the commercial affairs of the Company which they ought to pay, in order to trade to the most advantage. Then in the interior of the country, although the regulations of Government, and the constant injunctions of all authorities, both at home and abroad, are directed to the abolition of all unfair advantage, it is next to impossible that such orders or rules can practically be enforced: the commercial agents, as a part of the governing aristocracy of the country, must, whether they will or no, have an influence that does not belong to private traders. Every person they employ must, in some degree, have a similar influence; and it is therefore utterly impossible, even although the regulations should be as strict as words can make them against any unfair advantage, that a private trader can go into a district in the immediate vicinity of a Company's factory on a footing of equality with them. There cannot be fair competition. If the Government agent be a man zealous in his work, he must push his authority beyond its due limits: and if he is an idler and careless about his work, the Government must of course lose: in both ways the system has been found open to objection. The price of the important article of silk was run up far beyond what was reasonable, in consequence of mismanagement, and the want of sufficient control over the commercial agent's proceedings; and this in a degree that could not have occurred with private traders. The Company's trade in that article does injuriously impede private adventure. Even the purchases of Government in the Calcutta market, though far less objectionable than the Government trade in the interior, are open to serious objection on commercial principles. The private trader does not know on what he may reckon: the Government may come one year with £700,000 to purchase indigo, and another year, perhaps, purchase nothing. The uncertainty of the amount with which the Government, looking to remittance, not to profit, may come into the market, must operate to derange private transactions, though the purchase of the article be conducted on perfectly fair terms. All Government trade must be a monopoly, and the moment it ceases avowedly to monopolize, it should cease to trade at all. Whether it should monopolize is another question. It has in Bengal long ceased to claim a monopoly in its commercial capacity, and it should long ago have ceased to trade in the articles not included in its territorial monopolies. The manufacture of opium and salt is conducted with a view to revenue, not trade. The purchase of cotton for the China market falls under the same rule as the purchase of silk, though not open to the same degree of objection, because the trade is comparatively free. But dearness, or inferiority of quality must, in the long run, be apprehended, as the consequence of all commercial transactions in which the Government engage, seeing that the commercial concerns of the Company have occupied very little of the attention of the Government, contrasted with the largeness of the sum which has been laid out. All articles produced by natives, as cotton is, would be brought to Calcutta without the intervention of any European, if wanted there; and the native establishments are all economically conducted. The uncertainty of the Company's demand has an unfavourable effect on the price paid, in so far as regards the supply of the market, for the advantageous regulation of which a steady demand

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* See also proceedings of the Company under the heads "Silk," "Indigo," &c.

demand seems to be very desirable; and any thing which renders the demand unsteady and uncertain, must operate with prudent men to cause the market to be supplied at a higher rate than if the demand they had to meet were free from such uncertainty. In so far therefore as the Company's arrangements must cause uncertainty, they are likely to enhance cost; but as that enhancement of cost will affect all speculators equally, it does not appear how it should interfere with the Company's profit on their immediate speculations: although, therefore, steadiness of demand be very important to the general commerce of the country, and therefore to the Company as its rulers, that unsteadiness of demand may not occasion a loss to them in their commercial dealings. The discontinuance of the Government trade in India, and the free settlement of Europeans there, would cause commerce to improve: the goods now imported by the Company must take the place of goods that would be imported by individuals. All Government interference with manufactures is prejudicial: a Government cannot devote sufficient attention to such concerns. They long paid for gunpowder more than they need have done, if the country had had a considerable number of intelligent men in it to compete with the Government manufacture; the article is now comparatively cheap; but probably the same remark may still be made. The Indian trade is practically open now, except in such particulars as are connected with political circumstances, residence of Europeans, &c. There is no impediment to carrying on trade freely with India: the only existing evil is the Company trading themselves, as they do not trade on the ordinary conditions of profit and loss. The Company do not trade now as merchants, and the only trade they cling to is a trade of remittance. There is no grievance suffered by private merchants under the administration of the Company in trade with India; they do not find any molestation from the Company's authorities; at the same time, where the Company have mercantile establishments, it was exceedingly difficult for an individual to enter into competition with the Company until some late regulations were adopted, which originated from a very strong memorial being presented to the Board of Control, and by them to the Company. These representations received due attention, and in consequence directions were sent to India to provide against the abuses arising from the right of pre-emption enjoyed by the Company, and the advantages they possessed in obtaining the priority of payment of their debts over every individual, where the Company and individuals had made simultaneous advances; in such cases the Government swept away the whole property. Nothing could be more correct than the views the Company entertained and the regulations adopted in consequence; but still there is deference paid to the Company arising out of their union in India of the character of sovereign. No mercantile establishment would have dared to continue to give the prices for indigo which the Company gave, in the face of a great accumulation of stock and an adverse state of the market. It is the connection between the Company and the Government in India that has kept up the price there unnaturally, and produced the excessive quantity of indigo by that stimulus which would not otherwise have existed. The private traders, however, have imported a much larger quantity of indigo at the high prices than the Company have. When the Company went out of the market and declined purchasing as heretofore, which they did in 1830, the depression in price was so great as to be ruinous to many individuals. As little as possible has of late been done by the Company, for their whole object latterly has been to trade for remittance, and not as a commercial body. Though the trading might bring the rupee to England a little above the ordinary rate of exchange, the Company possessed an unfair advantage, trading as they did with the revenues at their back, and it was unjust to the mercantile adventurer. On the face of the Company's accounts it will appear that, for the last five years, there has been a considerable loss both on indigo and silk. It was the unanimous opinion of the London merchants that it was desirable that the Company should not trade; they were all convinced, many of them having been in India, of the incompatibility of the two characters of sovereign and merchant, and of the inconvenience which the trade suffered from the union. The separation of the two characters would tend to increase the business of the agency houses in India, and of the commercial body generally; but it is desirable, not

Mack

Bracken, 1713

Mackenzie, 218

Larper, 1773

1975

1976, 1952

1987

1986

1976

1977

1979

1989

1991

- Palmer, 1374
1376
Wilkinson, 2245
Bracken, 1885.
Simons, 1033
Mackenzie, 268
- so much upon the ground of increased advantages to those parties, as for the purpose of removing the difficulties and evils which are inseparable from the mercantile body coming into competition with the Company, who do not trade on the usual principles of profit and loss. It is not desired by the merchants so much under the idea that they shall benefit by it, as from its ensuring the removal of the evils which they feel. The power might be left to the Company of occasionally making a remittance of goods, not for the purpose of traffic, but they would never use it, if debarred from trade generally. It is always prejudicial in a great body like the Company acting occasionally upon the market in India, by orders transmitted from this country. It is not desirable that they should continue purchasers upon the system hitherto pursued, which has had the effect of raising prices considerably, and thus stimulating an extra production, which, from an unfavourable out-turn attendant upon the sales in this country, has been subsequently checked, the extra quantity so produced thereby occasioning a glut in the market of India, and consequently an undue depreciation.
- The Company's commercial agents are paid on a more costly scale than the agents of private manufacturers would be, because there is the dignity of the Company, in some degree, to be upheld in the eyes of the natives. This necessity for increased expense is perhaps a good reason why the Company should not engage in manufactures.
- In the regular Company's ships chartered for six voyages, the freight paid by them is dearer than that paid by private merchants; but in ships hired for one voyage it is neither more nor less than a private person would pay. The system under which the ships are engaged was forced on the Company by law.
- The conduct of the Government or its officers towards the merchants of Calcutta has not, in any essential degree, been influenced by considerations of personal favour. The introduction of the Stamp law is a case in point. Several of the merchants were very active in opposing it, yet they received at the very time, or immediately afterwards, considerable advances from the public treasury to assist them out of difficulty. Those advances were made without any reference to the favour or disfavour with which the individuals were regarded; and generally, the same system has prevailed; so that the merchants of Calcutta are little, if at all, dependent in matters of business on the terms on which they may be with the public authorities; they are, as to all essentials, independent of them.
- Silk.*
- Wallich, 2330.
- There are in India two plants that are most extensively applied to the feeding of the silk-worm, the mulberry and the castor-oil plant, or, as it is generally called, palma christi. The mulberry is infinitely the most important, both with reference to the extent of its cultivation, and to the product of the silk-worm reared by it. Inferior kinds of silk are also produced from several plants of the laurel tribe, especially in the north-western provinces of Bengal.
- Wilkinson, 2127
- The description of mulberry cultivated in India, is that called the Indian variety. The trees are generally planted in rows about six or eight inches apart, and they are about three feet high; but sometimes they are suffered to run up in coppice, about six feet or more in height, without being thinned. The leaves of the latter are reckoned more nutritious, and the plant is also thought to suffer less from the weather; but the former is the general custom, perhaps because it is the oldest, and that the other has not been introduced long enough for it to be decided that it is actually superior. The cultivation of the mulberry might be improved. The natives will not rear the plant in such a manner as to make the supply anything more than a very scanty leaf. A man who can supply exactly the quantum necessary for the filature in his vicinity would not take the trouble to exceed it. It would be extremely well worth while to cultivate the arborescent kinds of mulberry. Throughout the Bengal provinces, the dwarf kind only is cultivated, consisting in shoots, in cuttings that are allowed to remain only a very few seasons. The extreme rapidity of the produce is that at which the natives aim, that which will
- Wallich, 2418

will give them an immediate return ; but that return is not so great as it would be, if they adopted the mode pursued in the south of Europe, of having mulberry trees in cultivation. The periods of gathering the crops vary in different districts ; in some the gathering is in March and April, July and November. The crop in the rains (July) is the most abundant. The leaves are first picked about four months after the trees are planted ; afterwards there is a crop every eight or ten weeks. In the first year, there are about four crops, and in the second, six. The trees are planted generally about the end of November, and the first crop of leaves is ready in the next January or February ; they are hoed and dug between the rows, not much watered, and weeded occasionally ; there is no irrigation. After the leaves are gathered, the plant is cut down to about a foot from the ground ; once in the year, at the end of November, it is cut down to the ground, and at that time, but not at others, the ground is ploughed between the rows. A dry soil is reckoned preferable for the plant : there is no fruit. There is not much care taken in the cultivation. The ryots are the producers : there is no European superintendence at all. In general the same parties grow the leaves and keep the worms. When the leaves are given to the worms, they are chopped small. A begah (about one third of an English acre) of plants will feed 1,000 worms a day.

There are two species of worms, the country worm and the large annual. The country worm hatches four times a year, and the large annual only once. The one species is not more hardy than the other, nor more prolific. There is more silk from a cocoon of the annual worm, but the country or *dessy* worm is the best by far. The difference in the silk produced seems wholly to depend on the season in which the cocoon is spun. The best season is what is called the November bund, in which the cocoons are finished spinning about the beginning of December, and the worst is the rainy. The quantity during the rains is larger, but the quality is very much inferior. The two species of worms are quite alike as to the treatment they require. Treatment makes no difference as to their health or produce. The interval between the time of being hatched, and that of commencing the cocoons, depends very much on the season in which they are hatched ; sometimes it is between two and three months ; and in the hot season, from twenty-five to not much more than thirty days. No artificial heat is used for hatching the eggs, but in the cold season there is a fire occasionally for preserving the worms : they are kept in a place where the light is excluded when the air is, because there are no glazed windows. It is a mere hut with a hole in the wall, before which a screen is placed when it is desired to exclude the air ; and that of course excludes the light at the same time. This is done during the whole time the worm is feeding. Improvement might be made by erecting the buildings more on the European plan. A dry soil is reckoned preferable for the worms as well as the plant. The silk is reeled principally at the Company's filatures, but partially by the peasantry at their own houses. The process is very similar, but inferior, to that used by the Company. The cocoons are placed in hot water, and wound off upon reels which are fixed. The coppers are set in masonry, having under each a furnace for heating the water : the plan is entirely the Italian. The cocoons are reckoned to give in silk about a twentieth part of their weight.

The rent of land for the production of silk is considerably higher than that of other land. The Company do not deal immediately with the growers of the mulberry, nor with the feeders of the worms. The agent who comes in immediate contact with the Company is a middle-man, called a *pykar*, to whom advances of cash, on a rough guess as to the amount that will be required, are made by the commercial resident, which the *pykar* circulates amongst the breeders of silk-worms throughout this district. The resident in no degree superintends the production of the cocoon, or of the worm, or of the leaf. The price paid is always subject to the confirmation of the Board of Trade ; they determine the price according to the opinion they can form upon the general information obtained from the silk residents. The silk is inspected at the export warehouse at Calcutta, and commission would be withheld from the resident if it were not of proper quality.

Wilkinson 21,37

21,38, 2272

2289

2161.

2285

2169

2291

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2282, 2310.

2273

2181

2293.

2318

Simons, 1072
Wilkinson, 2208

Simons, 1200

- lity. Each of the Company's factories employs numerous pykars, who give security for the money advanced to them. The pykars deliver the cocoons into the storehouses of the factories, where they are reeled into silk by native workmen, hired and paid by the factory. The filature gomastah, that is, the natives employed under the resident, inspect the cocoons, and if any are very bad the resident rejects them. The resident looks occasionally at the operation of winding the silk, but no one European could be constantly on the spot, and it is mainly superintended by natives. The pykar is allowed to be at the filature whenever he likes, to see that justice is done to himself. A settlement is made with the pykars for each bund respectively, but this does not take place until all the cocoons of the bund have been wound into silk. When that is completed, the resident proposes such a price per seer for the silk produced, to be paid to the pykar, as he judges reasonable, having given due consideration to the productiveness or otherwise of the season, and to all the circumstances attending the provision of the silk: this price is reported to the Board of Trade for their approval. This course supposes that each commercial resident fixes the price for his own particular factory, without reference to what may be paid by the other residents for silk of the same bunds; but in 1827, the Board of Trade divided the silk districts into circles, and resolved that one rate of price only should be allowed at all the factories in each circle. The price is calculated upon the quantity of silk which the cocoons produce, and depends upon the favourableness or otherwise of the bund. In March 1831, the Board of Trade re-considered the system for providing raw silk, and came to a resolution to discontinue the practice of settling with the pykars after the silk was wound, and determined to fix and promulgate the price which the Company would pay, before the bund commenced. The result of this measure cannot yet be known in England. The court have no certain information of the prices paid by the pykars to the rearers of silk-worms. The above is the general system, but in some instances the residents obtain cocoons directly from the rearers, without the intervention of the pykar, which mode is called the neez cultivation; and they occasionally buy silk under contract. There are twelve residencies, all in the province of Bengal, and each under the superintendence of one European civil servant. In some instances the residents are certainly not persons fully acquainted with the details of the silk filature, because they are occasionally removed from a residency where no silk is got up, and placed over one where little or nothing else is worked. They are hardly such persons as a manufacturer would select to superintend such establishments; but many of them take a good deal of interest in their business. In all business requiring advances to be paid before the article is delivered, there is considerable loss from bad debts.
- On an average number of years raw silk has been a good remittance. It has been 2s. 8d. per sicca rupee, about five-tenths of a penny above that made by indigo. If interest were reckoned on the advances made from the time of receiving them until the shipment of the silk at Calcutta, and if the actual rent, wear and tear of the buildings entered into the computation, there would probably be no difference between the remittance by silk and that by indigo, which the Company do not manufacture, but purchase in the market. The silk does not realize in London as much silver as it cost in Calcutta; it is so far a losing concern.
- There has been a progressive rise in the price of raw silk in India from 1815 to 1830, occasioned by the Company endeavouring to increase their quantity. The supply was not equal to the demand, and the growers availed themselves of that circumstance. The price in London has not fallen in the same proportion as that of all other Indian commodities. The consumption of silk is steadily increasing, and the Company have endeavoured by all proper means to augment the quantity of Bengal raw silk, and have been successful, as also in maintaining its quality. No more silk has been produced than the market required: of other commodities there has been evidently too much.
- The Company introduced into India the Italian method of winding silk, and at a great expense have maintained that kind of machinery. If the Company did not continue to produce silk, the Italian method of winding it would fail, and the silk fall back to its old character.

character. Many years of assiduous attention have been paid to the Bengal silk by the Company, and further measures are at this time in progress to introduce European silkworms and mulberries. At present the Company's silk is unquestionably better than that imported by individuals, though the latter has been advancing in quality. There is no danger of the character of the silk deteriorating if wholly in the hands of private growers, as the price depends much upon the quality, and that upon the care which the individual exercises in the production. The quality is of great importance.

The trade in silk is perfectly free. Persons have gone from England and built filatures at a considerable expense, but they did not find their purpose answered. The silk trade depends upon the growth of the mulberry tree: it is believed that it will only grow in certain parts of Bengal. In every eligible situation the Company have a large tract of country under the influence of their silk agents: individuals could not establish silk filatures without coming into competition with them. About five or six years ago, a gentleman was unable to obtain permission to proceed to India, in consequence of its being supposed that he was about to embark in the silk trade. Other gentlemen have gone out for that purpose, but have returned to England, finding that they could make nothing of it. The great price that the Company gave to the rearers of cocoons was beyond what a private individual could give. This was attributed to different causes: one, that it was done with the express purpose of excluding the competition of private merchants; another, that as the agents are paid by a commission on the price, it was more to their interest that that price should be large. The orders also from home had directed a larger quantity to be transmitted. In 1826 the Company gave on the average 14*rs.* 6*a.* a seer, and it was said that it could then be purchased by individuals for 12*rs.* and made for 10*rs.* 8*a.* In 1826, Mr. Wilkinson went to Bengal for the purpose of introducing an improvement in the reeling of silk, invented by Mr. Heathcoat, of Tiverton. The Court of Directors would not undertake the experiment themselves, but they were willing that Mr. Heathcoat should himself try the plan. When Mr. Wilkinson reached India, he found that there were no private filatures, and on application to the local Governor, who gave him every facility, the experiment was tried at the Company's factories at Santipoor and Rungpoor. On some of the bales so completed, there has been an acknowledged superiority; but in others the experiment failed, owing partly to the want of staple in the cocoons of India, and partly to the inattention and carelessness of the natives: they require more superintendence. The Court of Directors did not think the improvement of sufficient importance to warrant their giving anything for the use of the patent. Mr. Heathcoat having a patent right, would have expected to be paid so much per lb. The improvement has been very generally introduced in France and Italy.

The Company's filatures with the machinery are probably worth twenty lacs of rupees or more, if actively employed.

No man or body of men could be found who would take the Company's filatures at any thing like what they are worth; if they did, judging from what is seen of private trade, they would degenerate. If the Company were to cease finding silk themselves, no doubt there would be persons who would enter into the silk trade, but they probably would not take the Company's filatures, as they have erected more expensive buildings than individuals might wish to purchase; that is, if the Company were to expect interest upon their outlay; but if the rent were such as a private merchant could afford to give, there would be no difficulty. No private merchant going into the interior to engage in the silk trade would think of erecting the sort of houses in which the present commercial residents live. The price of silk might be very much reduced by private competition and private economy, and the silk trade would be greatly increased. Generally speaking, the silk establishment of the Company is on a good economical footing. The salary of the chief native servant of a factory is about £20 a month. The house of the commercial resident is large, but perhaps it cannot be called extravagantly so. Many comforts are required in India which are not needed in England; and the expenses are greater than they would be here, in house-rent, number of servants, &c. If private individuals were to form

Simons, 1101
Bracken, 1890
Larperet, 1969

Simons, 1094
1097
Bracken, 1881

1889

Wilkinson, 2100

2204

2102

2116, 2315-
2110, 2305

2300.

2189.

Simons, 1093

1102

Bracken, 1883

Wilkinson, 223

- Lapent, 1968. form silk establishments in India, they would not maintain their principal agents on so costly a scale. The Company have their dignity to uphold. The merchants in Calcutta and Europeans in general live in India in a more splendid style than persons of the same class in this country. If the Company went out of the trade altogether, no doubt individuals would be inclined to take their factories. Silk has increased so much in consumption at home, that capital in India would be invested in its production, as has been the case with indigo; indeed, it would be very desirable to have another article in which capital could be profitably invested.
- Simons, 1095. The silk of Bengal is not so strong in its nature as the silk of Italy, France, or Turkey.
1102 Italian silk is good, French silk is good, and Indian silk is also good, each in its way; and Bengal silk is as much required as any other kind, if not more so.
- Wilkinson, 2185. The principal part of that which comes from Bengal is coarser than that from Italy, that is, there is generally a smaller proportion of the fine than of the coarse silk ordered by the Company. By the method adopted in India, more attention is paid to quantity than to quality, in as much as it is more the interest of the people who are concerned, especially the natives, to get a large quantity than to get a good quality, because their gain in proportion is larger. The inferiority of the silk arises in a great measure from the carelessness of the reelers. It has been attributed to their inability to do it better, in consequence of being overworked; but if that is the case in some of the districts, it certainly is not so in all. They require much closer superintendence than is given. If Europeans or half-castes were employed in the filatures as overlookers, the silk would be wound in a much better manner. Silk wound under careful inspection has been pronounced worth 2s. a lb. more than the ordinary silk from Bengal. The people are not at all inferior as workmen to those of Europe; and as far as winding is concerned, they would, if more looked after, be at least equal, if not superior. A very considerable improvement might be effected both in the cocoon as it is spun by the worm, and in the silk afterwards as it is wound from the cocoon. Nothing like the same degree of care is taken as there is in France and Italy. The silk is foul and uneven, and what is called endy, having many breaks in it, occasioned by the plan of cleaning it on the reel, when the skein is on the full stretch, and when consequently an attempt to pull off what they call a gout, must naturally break the thread. By attention and care it might be very much improved; but after all, the climate of India is certainly against it. Improvement might be made in the mode of feeding the worms, and rearing the plants they are fed upon; but it is doubted whether an improved breed of the worm itself could be successfully introduced from the south of Europe. At Tiverton, the average quantity of a 15-cocoon silk reeled per day from one basin is 10 ounces; in India, 8½ ounces from the best, and a smaller quantity from inferior cocoons, although in India two skeins are wound at once on the reel, and at Tiverton only one; if they had wound two, the produce would be at least 16 ounces.
2208.
2311 The mode of obtaining the silk piece-goods is, the commercial resident issues advances to the head native weavers, under contracts for bandannas to be delivered in return. The import of silk bandannas has rather increased, but not materially: they come at a remittance of about 1s. 11d. The quantity of bandannas brought by the private trade considerably exceeds that imported by the Company.
- 2310
Wallich, 2417
Wilkinson, 2205
Simons, 1000
1276

Cotton.

- Mackenzie, 91. The cotton of India is bad, but, from experiments lately made, there is no doubt that
Bracken, 1830 if good seed was procured, beautiful cotton might be produced abundantly. The failure
Wallich, 1391 of the natives in producing superior cotton is not so much attributable to their want of skill as to that extraordinary feature in the character of the natives, that they will not do that, at a greater advance of capital, or with greater exertion, which would give them a better return, if they can get it for less trouble by the use of less capital; they are the most improvident of the whole human race in that respect. A native of India will never exert
- 2340

exert himself beyond what is necessary to procure the minimum of profit. To this state of things it is owing, for one instance, that the cotton plant is almost always reared as an annual in India, whereas in America and the Leeward Islands it is triennial. India produces of itself every variety of cotton; the justly celebrated Sea-island cotton is actually in cultivation in several places in India; but owing to the manner of husbandry among the natives, it very soon loses all its principal characters for goodness, and returns to the quality of the original wild species. Proximity to the sea appears to be a necessary condition for continuing the excellence of cotton, but the miserable husbandry is quite sufficient to deteriorate any cotton. That brought home is extremely foul; the people who deal in it do not take those measures which would at once prevent that circumstance. From the manner in which the cotton is cleansed, parts of the oily substance of the seed are allowed to remain, and that not only discolours the cotton, but gives it an oiliness, and a peculiar liability to become mouldy. It is conveyed to Calcutta in badly constructed boats, without any sufficient protection from the weather, and after lying on board four or five months, it arrives, as might be expected, in a dirty and filthy state. It is then put into cotton screws, which are not worked in a proper manner, and is subjected to an unequal pressure. With a quantity of seeds screwed into it, and in the state of dampness and mouldiness in which it is imported into Calcutta, it is sent on board ship for England. It is impossible that the finest cotton could, under such treatment, arrive here in a better state than the Bengal cottons do. The Company export cotton largely from Bengal and Bombay; and they did so from Madras till the factories were abolished, for the purpose of contributing towards the purchase of the tea investment in China. The cotton is purchased by the Company's commercial agents at the principal marts in the interior of India, and not immediately from the grower. The purchase of cotton by the Company for the China market is as objectionable in principle as that of silk, but it is not open to the same degree of objection, because the trade is comparatively free. All articles produced by natives, as cotton is, would be brought to Calcutta, if wanted there, without the intervention of any European, and at less expense. The Company have paid more for cotton than they ought to have paid.

Indigo.

THE Court of Directors, in the month of June yearly, transmit orders to the Governor-general in Council, signifying their view of the quantity of indigo which may be provided in the succeeding Indian season, and the prices which may be paid for it. The annual arrivals of indigo in Calcutta from the interior commences about the end of October, and an advertisement is then published in the newspapers, signifying that the Board of Trade are ready to receive sealed proposals from such persons as are desirous of selling indigo to the Company. Those tenders which appear most advantageous in price are accepted, reference being had to the quality, which in indigo varies considerably. This course is continued from day to day through the months of November, December, and January, or until the desired quantity is procured. The amount to be purchased is always kept secret, or intended to be so. Any quantity may be tendered, and the Government reserves to itself the power of taking any portion of that tendered.

The Company commenced making larger remittances in indigo to this country in 1819-20. The average remittance per sicca rupee has been rather better than 1s. 11½d., but in making up the account, interest has not been computed on the capital advanced. The remittance of indigo has of late been a loss to the Company, and to every body who engaged in it. Indigo and other goods have recently been hypothecated to the Company by private persons, who give bills of exchange upon London in repayment. This measure, however, has not succeeded, the whole amount of bills so obtained being only £100,000 in two years.

The real manufacture of indigo in India was created by the Company; the old Indian way of making indigo was very imperfect; the Company advanced money to the indigo planters. But that which caused the great and sudden prosperity of the indigo trade in Bengal,

Wallich, 1394

2392

1308

Simons, 1121

Mackenzie, 218

228

Simons, 1024

Mackenzie, 225

Simons, 1025

Mackenzie, 221

Simons, 1027

1038

1050

1030

Simons, 1029

Simons, 1030

1061

Bengal, was the destruction of St. Domingo, which supplied nearly all the world with indigo previously to the French revolution, and after the revolt of the blacks did not produce a pound. The indigo factories were all destroyed in the early days of the insurrection.

Mackenzie, 214
226

Palmer, 1377

Lapent, 1952
1976, 1987

1983
1986
1988

Bracken, 1878
Larpet, 1971
Wallich, 2386

1879

1932
1927

1928, 1933

Hall, 2526

Wallich, 2423
2342

2420

2419

Mackenzie, 9

The uncertainty of the demand with which the Company may come into the market, must operate to derange private transactions, although the purchase of the article be conducted on perfectly fair terms. The Company may come one year with £700,000 to buy indigo, and another year may purchase none. This uncertainty probably raises the price. It is not desirable that the Company should continue purchasers of indigo upon the present system, which has had the effect of raising prices considerably, and thus stimulating an extra production, so as to occasion a glut in the market, and an undue depreciation. The Company have given an unnatural stimulus to the growth of indigo, and by their buying so largely every year, a higher price has been fixed than was justified by the state of the home market. They have submitted to prices which no other merchant would have given, and on which a loss must have been sustained. When it is known that a public body is to come into the market for an extensive purchase, and that their ships are ready, and that a large supply must of necessity be sent home, the whole trade is thrown into an unnatural state. The reduction of the quantity more nearly to the level of the consumption will be attended with the ruin of many factories, and much individual distress. The private merchants have, however, overtraded at the high prices to a greater extent than the Company have, owing to the necessity on their part also of making remittances to England.

The indigo trade will not increase much beyond its present amount, unless there should be a great increase of manufactures in this country. At present the supply is rather above the demand.

At the existing prices Bengal indigo will drive all others out of the market. The better description of factories can afford to grow it even at the present prices, but it will only just pay them; it will not give any profit to an intermediate person, but only to the planter himself.

The French consumption of indigo has much increased, and there has been of late years a very considerable augmentation of the number of French ships employed in the indigo trade. We do not allow the products of India to be brought here in French vessels, and they therefore will not allow those products to be taken to France in British vessels. Their merchants must, therefore, employ vessels other than British to import their indigo, and as there is an additional duty in France on indigo imported *via* England, they can import it more cheaply from Calcutta than London. All the indigo that goes from England to France is taken in small Netherlands vessels to Flanders, and so imported into France; some perhaps is smuggled in, but the greatest portion is regularly imported.

There are several plants that produce indigo, and that from which it is now commonly obtained is not likely to continue the exclusive source of that branch of trade. The plant as it is now cultivated (without reference to the manufacture) is probably not susceptible of much improvement. Great improvements have been made by Europeans in the manufacture, but those who engage in its cultivation are still obliged to continue the old method of making advances to the ryots for the supply. The native indigo was beyond description bad; but even their mode of manufacturing it has been improved by the example of Europeans. The success that has attended the production of the plant by the natives, is attributable to the extreme facility with which it is grown, and the abundant crop which is produced in favourable seasons. It is an annual requiring little care, and bringing a prompt return of money, with a small amount of labour; an object the natives always have in view. The extent of country occupied by the indigo planter appears to be excessive, for it is understood that it requires on an average forty beguhs of land to produce a maund of indigo. Better farming would probably increase the produce.

Lac-t

SEVERAL plants produce lac-dye ; many species of figs and of jujubes, the polash or dak, a sort of cytissus, and even a sort of mulberry, besides others. There has been improvement in the production. The article itself is very important ; but it is considered inferior, because the operation employed in India for extracting it is very crude. It is a red dye, used in the dyeing of cloths : it is not likely to interfere with indigo.

Wallich, 2431

2411

Sugar.

THE manufacture of sugar appears to be very ill conducted in India, and the land fit for sugar-cane to be very abundant. The production of sugar might be extended by a better mode of manufacture ; and, independently of foreign export, there is a large demand for sugar in India, which would be extended in proportion as it is more easily obtained. It is at present exceeded in consumption only by rice : a more judicious selection of cane, and, above all, a more fit and economical extraction and conversion of the juice into sugar (the present manufacture being of the rudest kind), would occasion a much greater demand for the article. Sugar is likely to be an article of great commercial importance if more cheaply produced, as the only limit to its consumption is its price. Sugar manufactories on the West-India process have been recently established.

Mackenzie, 91

Wallich, 2388

2386, 2412

Bracken, 1863

Simons, 1002.

1001

The Company have a factory at Benares, with some established servants, who employ agents to go about the country and buy sugar, after it has been refined, from the petty manufacturers ; but orders have been recently issued to discontinue the import of sugar.

Saltpetre.

THE import of saltpetre by the Company was, in 1814, 146,000 cwt., and is now 37,300. The trade has been entirely free since 1814. Since the private trader has imported it, it has fallen to so low a price that it has been bought as manure for land. In 1814 the price was 89s. 6d. per cwt., and in 1823, 21s. ; but it has since risen to 42s., and is now 37s. Previously to 1814 the import by the Company was profitable to them ; since that period it has been, until 1830, unprofitable. They manufacture it themselves : it can only be made in the dry season.

Tobacco.

TOBACCO has no native name, a proof that it is not the produce of India, but it has been there from time immemorial. It is one of the smaller cultivations of India, and is only produced for domestic use. The natives of Hindostan, high and low, Mahomedans and Hindoos, consume it, but nevertheless the quantity of tobacco used is not large, as it is not consumed in the raw state as in Europe, but mixed up with molasses, spices, and fruits. On very rich land there have been produced per acre eight maunds, that is, eighty seers, about 160 lb. ; but on the average, four maunds would be considered a fair return in green leaf. The tobacco in India is altogether bad ; but there is a great probability that it might be improved. India is capable of producing good tobacco ; that grown in the Northern Circars, to a very limited extent however, and converted into snuff at Masulipatam, is much prized in England. Another esteemed kind, but also of limited produce, is grown at Bundelcund : and some excellent Havannah tobacco has been grown at Boglipoor. Some from the Burmese country has been reported by brokers in London as equal to the best from the West-Indies. Tobacco is used to a certain extent in China with opium.

Wallich, 2425

Mackenzie, 91
Wallich, 2428

2427

Coffee.

THERE is great room for improvement in the production of coffee. It is only since 1823 that it has been cultivated extensively. The Government then allowed planters to engage in the cultivation, under facilities which have never been conceded to any other branch of planters, namely, permission to hold lands for a long series of years, and to grow any other article on certain portions of those lands *bonâ fide* intended for coffee. In Lower Bengal 10,000 or 12,000 begahs (about 4,000 acres) have been laid out in coffee, principally

2401

principally by Europeans. A number of mercantile houses, as well as private individuals, have entered upon the cultivation; but coffee being a shrubby plant, requires at least ten years to come properly into the market. The coffee produced in the Botanical Garden at Calcutta was very good. Bengal and the Burmese territory are peculiarly fitted for the cultivation; the Upper Provinces are entirely unfit. The consumption of coffee in India is limited, as the Hindoos do not drink it, though it is not known that there is any religious prejudice against it.

Iron.

Bracken, 1841

MR. HEATH, formerly of the Madras Civil Service, has gone to that Presidency with a monopoly of the manufacture of iron, for the remainder of the Company's charter. He has set up a foundry at Porto Novo. The iron cast there is of the best possible description, and is cheaper than the cast iron sent from this country. He has made knives and scissors considered equal to any from Sheffield; but it is likely that he will find it more to his advantage to send the iron to be manufactured into articles at Calcutta. There is also a great quantity of iron ore in the vicinity of Burdwan.

Coal.

Peacock, 1568
Johnston, 1709

CUTCH coal has not been found good for steam-engines. There is no coal on that side of India sufficiently good; and at Bombay English coal has been found cheaper and more available than that of India. The Burdwan coal is the best in India, and none other is used in Calcutta. The price is ten annas (ten-sixteenths of 2s.) per bushel. It does not cake, but burns to a white ash. It is not so good as English coal for the manufacture of iron. The coal-field at Burdwan is very extensive: the seam now working is about nine feet thick, and ninety below the surface; it extends in a nearly horizontal direction. The water, which is principally rain-water, is pumped out by a small steam-engine. There is another coal-field worked at Mirzipore, about forty miles from Calcutta. This also extends over a considerable part of the country. The best English coal is, in regard to strength, to the best Bengal coal, in the proportion of five to three.

Bracken, 1859

Johnston, 1780

Timber.

Wallich, 2347, 2346

2351, 2369
2358
2356

2360

364, 2370

THE timber of India might become a commercial resource of greater importance than it is at present. The forests contain every description of timber in the world, or a substitute for it. The principal kinds are, teak, saul, sissoo, toon, jarrool, and mango: the last is excellent for ordinary purposes. Saul is useful for ship and house-building, and also for gun-carriages, and other military purposes. There has been, owing to bad and extravagant management, a great falling off in the production of saul, sissoo and bamboo. There is a great abundance of pine and oak. If there is any point on which European skill might be profitably employed, it would be in establishing saw-mills, and local half-wrought material depôts, by which means the enormous risk that is experienced in floating down the timber entire from Cawnpore and Goruckpore might be obviated. But European agency would be still more advantageous with reference to the forests in Martaban and on the Tenasserim coast, which are not so destructive to Europeans as those in Hindostan; it would also be particularly applicable in the continuance of modes for conveying timber, now considered inaccessible, and in introducing a regular system of seasoning. The timber that is felled to-day is likely to come into the market to-morrow, and to this circumstance more than to any other is to be attributed the devastation by white ants and dry rot. The timber of India might become an article of foreign trade.

Steam Communication by way of the Cape.

Peacock, 1450
Johnston 1662

THE Enterprise steam vessel, of 120-horse power, was 113 days (103 of which she was actually under weigh) in reaching Calcutta from England, by way of the Cape of Good Hope. She used both sail and steam. The consumption of coal was 580 chaldrons. The speed of this voyage was not considered sufficient to warrant the expense

expense and trouble; and it does not appear that a much better result can be expected, on account of the difficulty of obtaining relays of coals, and the time that must be wasted in getting them. Mr. Waghorn was very confident he could accomplish the voyage in eighty days; and Mr. Perkins proposed to do it in a vessel of 1,000 tons, to carry 800 tons of coal, in sixty days; but the success of such a plan is not very probable. The only advantage attainable by steam, in proceeding round the Cape, appears to be to have steam-engines of about thirty-horse power fitted into sailing vessels, to cross the variable winds. The expense of the voyage of the *Enterprise* was £43,000; she was sold to the Supreme Government for £40,000, otherwise the proprietors would have sustained a considerable loss. It was expected that she would have made the voyage in seventy or eighty days; but her capacity was so great that her rate of speed was very slow; she was unfit for the purpose. Under improved arrangements a voyage from England to India may be accomplished with greater success. Vessels of the first class of speed should be employed: they should not carry more than ten days' coal, and the depôts for that article should be so arranged as to leave not more than 1,200 or 1,300 miles between any two, and to be chosen at ports where the coal might be put on board with the least possible delay. The voyage might, on the average, be performed in eighty days, that of a sailing vessel being from 120 to 130. But in the present state of steam navigation it can never be accomplished but at a heavy sacrifice of money, and therefore would only answer if Government judged it expedient to have a quick communication without reference to the cost.

By way of the Red Sea.

The great objection to the steam communication between England and India, from Bombay by way of the Red Sea and Alexandria, is the enormous expense. The coals burnt in the Red Sea cost about £7 a ton (30s. cost in the Thames; 40s. freight to Bombay; 50s. from Bombay to the Red Sea, besides loss in removal and expense in landing, &c.). Each vessel employed would, at the lowest calculation, cost £25,000 a year; and four are required on each side of the isthmus. Steam-boats are the only vessels that can navigate the Red Sea with any certainty, in a reasonable time. The *Hugh Lindsay*, steamer, reached Suez from Bombay in 33 days, 20 working and 13 at anchor. The return voyage occupied 37 days, 20 working and 17 at anchor. At another time she went from Bombay to Cosseir in 22 days, five of which she was detained at anchor, principally for the purpose of getting coals. With respect to the transit of the isthmus, it is 70 miles from Suez to Cairo, usually performed on camels; from Cairo to Alexandria, by land, 140 miles; by the river, and round by Rosetta, 250. From Cosseir to Suez, by sea, is about 300 miles; from Ghenna to Cairo, which is the parallel part of the Nile, about 450; from Cosseir to Ghenna, by land, 120. The north wind blows down the Gulf of Suez all the year, except in December and January, which makes it advisable rather to go by Cosseir. At the mouth of the Red Sea the winds blow from the south-east from October to June, and in the other months chiefly from the north-west; at Socotra, from October to May, the winds are east, and from May to October west. There are no steam-boats on the Nile: the navigation would probably be favourable for them for a part of the year, from August to March. The canal from Alexandria to the Nile is not available for steam-boats. The coal sent to the Red Sea is usually coal which has been imported into Bombay from England. Cutch coal is not good for steam-engines, and the Burdwan coal must be sent from Calcutta. English coal is preferred, and has been found cheaper. There is no fuel on the Red Sea. If a ship canal were in existence from Suez to the Mediterranean, the trade between India and England might be carried on through that channel, and it would be the best of all for steam navigation, but it would give an advantage to Marseilles and all the French ports of the Mediterranean. In favourable seasons the despatches are received by way of the Red Sea in two months: perhaps with a better steam-vessel and every thing favourable they might be received in six weeks.

A monthly communication might be maintained between Bombay and Suez at an annual expense of from £45,000 to £50,000, but not under existing circumstances. A different

Peacock, 145
Johnston, 171
166

1716

Peacock, 145†
and 1584

1568

1569

1512

Johnston, 1725

ferent description of vessel must be built. It would perhaps answer ultimately as a commercial speculation, but it must be well established before any returns can be expected. A privilege of charging postage might be granted; but the principal returns would arise from the conveyance of passengers and packets. The British trade with India would not be materially affected by a ship canal uniting the Red Sea with the Mediterranean. The voyages would generally be longer by such a route than by the Cape; and the British trade might suffer from the advantages which such a route would give to other nations.

By way of the Euphrates.

Peacock, 1474
Cabell, 1649

From Bombay to Bussorah is 1,600 miles; from Bussorah to Beles on the Euphrates, between 900 and 1,000; and to Bir, 100 more. The Euphrates was formerly navigable; it has not recently been much used from Bir to Hillah: from Hillah to Bussorah it is still used by vessels drawing six feet water, almost all the year round; and the upper part of the river above Hillah is said to have more water. From Beles to Latichea, by Aleppo, the best route, is 160 miles; from Bir to Scanderoon 120, but that road is troublesome. There is a great deal of wood and bitumen on the Euphrates; the two together make excellent fuel. From Aleppo to Bussorah, by land, is 718 miles. There is another land passage from Beles to Aleppo and Antioch; it would be a good deal nearer than Latichea, and it would be the best of all routes if the Orontes were made navigable to Antioch. The stream of the Euphrates runs at about three miles an hour. The preferable communication with England would be by the Euphrates, if it could be rendered safe from the Turks and Arabs; but it would not answer for the purposes of commerce. Perhaps by that route letters might be received in five weeks. It would also be the cheaper route. Coals might be sent to Bussorah at £4. 10s. per ton.

Peacock, 1500

1522
1584

On the Rivers of India.

1534

THE objects proposed to be accomplished by steam navigation on the Ganges are, the conveyance of public treasure; of commissariat, military, and medical stores; of troops; of junior officers, who are generally sent up the country at the charge of Government; of stamped paper, &c. more expeditiously, cheaply, and safely than at present. It is not considered that steam navigation could be rendered useful for the conveyance of bulky merchandise or of letters, as it is not expected to be sufficiently expeditious to supersede the common dawk. The expense for boats now is about £40,000 per annum. The estimated annual expense of the steam-boats is the same; but it is calculated that the public will defray a part of the expense by using them for the conveyance of treasure and small parcels. Iron vessels are to be constructed to draw only two feet of water. It is supposed that they will be able to navigate the Ganges as high as Furruckabad.

1552.

1542

Johnston, 1754

173

Almost all the eatables sent from Europe, cheese, hams, preserves, beer, &c. would be conveyed by steam to the Upper Provinces in a state of high preservation; their arrival in a fit state for consumption has hitherto been very precarious. The consumption of all articles of import would be much increased by an expeditious mode of conveyance to the Upper Provinces, and the quick returns to the merchant would much more than compensate for a small increase of freight on the most bulky articles, and on small and light packages the freight would be less than the charge by dawk. In descending the stream the advantage over the common country boats will not be very great. Steam navigation will considerably reduce the expense of water-carriage to Government.

Peacock, 1557

1507

Cabell, 1645 1648

The Indus is perfectly navigable from the sea for at least 1,000 miles. The entrance is bad. There are few rivers in the world where steam might be used with better effect; it has no rocks or rapids to obstruct the ascent, and the current does not exceed two miles and a half an hour. The absence of coal would be amply supplied by the great abundance of wood which the banks of the river every where furnish.

India Trade.

THE commerce of Calcutta was in the hands of a very small number of houses before the opening of the present charter. Previously to that time the houses were chiefly formed of gentlemen who had been in the civil and military service, but who, perhaps, finding their habits better adapted for commercial pursuits, obtained permission to resign their situations and engage in agency and commercial business; they had of course a great many friends and acquaintances in their respective services, who lodged with them their accumulations. This money they lent to others, or employed themselves for purposes of commerce; they were, in fact, at first rather the distributors than the possessors of capital. They made their profit in the usual course of trade by commission, and by the difference of interest in lending and borrowing money. In the course of time, by carrying on a successful commerce, many became possessors of large capital, and returned to England, leaving great part of it in India; but the persons who succeeded generally came in without capital of their own: the same system was continued, and those houses became the usual depository of a great proportion of the savings of the military and civil services in India. When there were very few houses of business, very large fortunes were made by some of the gentlemen in them. After the opening of the trade other houses were established, connected more particularly with Liverpool and the outports, and that spread the business a great deal. The older houses have not now the same monopoly, as it were, which they formerly enjoyed; all the houses of agency receive deposits, pay drafts, and discount bills, but only one of them issues notes. The charge for agency made by the native houses is nearly one-third less than that made by European firms; the latter would probably charge on the purchase of an investment $2\frac{1}{2}$ per cent. and the former $1\frac{1}{2}$: but the business of the native houses is confined almost exclusively to their acting as brokers for American vessels.

There are about thirty or forty mercantile houses now in Calcutta. There is little or no distinction between the credit of the old houses and those which have been more recently established. The Government might take bills of from twenty to twenty-five. The usual practice is to consider about ten of them as houses of undoubted character and extensive connections and means.

The commercial transactions of Calcutta have very much increased of late years.

The increase of exports from England to India is in British cottons: spelter has also been an increased article of trade, but there is no British spelter; and in that article the trade has been overdone, and the price consequently reduced. The principal increase of the trade has been in cotton manufactures; but even exclusive of them there has been an increase. There is not the slightest objection on the part of any native to use articles of British manufacture; the only check has been the want of means to purchase them. Even liquors are now consumed in large quantities by natives in Calcutta who can afford to buy them. The cotton piece-goods are almost entirely used by the natives, being converted into clothes for their own use. The cotton twist is worked up for the same purpose; the lower numbers into the very coarsest kinds of cloth, in which the English manufacturers have not yet been able to compete successfully with them. There do not appear to be any articles of exports from this country which India could take more than are now sent.

Twist mills have been lately established in India. It is doubtful whether they will be able to compete with the cotton mills in England. There is great difficulty at present in repairing the machinery employed. The cotton twist that has already been made at those mills, of corresponding numbers with those sent out from this country, has not been so much liked by the natives as the English; it bears a less value than the corresponding numbers from England.

The products of India, which are more likely hereafter to be of commercial importance, are sugar, cotton, coffee, silk, indigo, tobacco, and perhaps tea, if the cultivation should succeed. There are other articles which India has formerly been thought capable of supplying,

Bracken, 1801

1806, 1930

1798, 1869

Larpent, 1992

Bracken, 1914

Simons, 881

Bracken, 1810

1795, 1934

Palmer, 1340

Bracken, 1838

Wallich, 2364
2455

Wallich, 2440 plying, but which, in consequence of particular circumstances, have been abandoned; for instance, hemp: it has been supposed that India produces kinds of hemp which are unequalled for strength of fibre. The production of spices might be carried to such an extent, as to be limited only by the demand.*

American Trade.

Simons, 905, 1266. THE decline of the supply of camlets for the China market by the Company, arises from the supply being illicitly introduced by the Americans; a matter which is as little to be doubted as any thing which is taken on opinion and trust can be. Large quantities of British manufactures are exported direct from this country to China by the Americans. They purchase camlets, but not long ells to any extent, because the duties in China on the latter are so moderate as not to afford any inducement to smuggling. The broad cloths which are rejected by the Company are purchased by the Americans; they also have some made, and they are now having some made rather of a better kind than the Company's. The Americans have pushed the trade of British manufactures in China to a very considerable extent, and to an extent to our disadvantage. Their trade has decreased, but that is attributable to the cessation of hostilities. When we were at war with the Continent they carried on the whole trade between Europe and China.

1805, 1930 In India the Americans generally employ native brokers to purchase their cargoes, as their charges are about one-third less than those of the European agency houses. The cargoes are in a great measure purchased by bullion, or by bills drawn, under letters of credit, on Messrs. Barings' house, or Mr. Wiggins, or other houses in the American trade.

1807, 1924 A very large amount has been raised by the Americans in that way, probably £200,000 or £300,000 in a year. One reason, perhaps, why they do not take merchandise is, that it is subject to double the import duties imposed on British ships; they do, however, sometimes take merchandise, and even English merchandise; but the relations of trade between India and America are not the same as between England and India. They have from fifteen to twenty ships every year in Calcutta. They take back indigo, silks, and a great deal of saltpetre. The greatest proportion of them clear out for the United States, but they sometimes clear out for the Mediterranean and the northern ports of Europe; they do not go from Calcutta to China.

1921

French Trade.

Bracken, 1933 THE French deal chiefly with the French mercantile houses which are established in Calcutta. They import a great quantity of wine, of which the natives now drink freely; champagne is their favourite. There has been a very considerable increase in the ships under the French flag employed in the indigo trade. The French consumption of indigo has very much increased lately. Owing to the treaty of navigation between this country and France, the indigo can be imported more cheaply from Calcutta than from London. As we would not allow their vessels to bring Indian articles to this country, they will not allow English vessels to take them to France. There is an additional duty in France on indigo imported *via* England.

1927
1929

Hall, 2523 If some arrangements could be made with the French Government with respect to the principles of our navigation law, which they now enforce against us in regard to goods the produce of India, it would be very beneficial; at present the French Government interdict the importation of all goods, the produce of Asia, direct from this country to France; they are therefore subject to the expense of a transit through Flanders, and thereby the direct trade between India and France is encouraged; but that trade is very limited, and provided the discriminating duties which exist in India were abandoned, it is possible that the French might abandon the restriction which affects the direct importation from this country. The French purchase in the Indian market at a great disadvantage: in indigo, for

* For extracts from official papers relating to the trade with Ava, Central Asia, Persia, &c. see Cabell, 1631, *et seq.*

† See to the contrary, Dr. Wallich, 2415.

for instance, there are only two or three qualities which are chiefly suited for their market; but they are compelled to buy an article which does not suit them to obtain one that does, and thereby increasing the cost of the former. In the outfit they have a difficulty in obtaining dead weight, and whatever freight of that kind they carry out must be attended with great expense. Not more than ten or fifteen ships go annually from France to British India. The quantity of wine shipped is not large, as it is understood that there is a predilection for wine which has been deposited in this country with some known mercantile house.

Opening of China Trade.

THE private trader is under great delusion as to the real advantage to be derived upon opening the trade with the port of Canton, particularly so far as regards the export trade from England in manufactures, and from other parts of Europe in articles of general produce for sale in Canton, for the purpose of purchasing the return cargo. He will not find that beneficial market which he contemplates for European articles; and as regards the article of tea constituting his return cargo, he will sustain this further inconvenience: the East-India Company are obliged to keep a year's stock in advance, which must necessarily be brought into the market when they are no longer by law required to retain it in their warehouses, so that the private trader, after having sustained the natural effects of competition in the purchase at Canton, and bought the article at a high price, will be met in the home market by the Company's stock, and will consequently find a low rate of sale. Seeing the manner in which the common people of this country consume tea, and the price they pay for it, there appears no reason to suppose that if they could obtain double or treble the quantity at the same price they would not take it: the consumption might be increased to almost any extent.

British manufactures would drive the native manufactures of China, or a great proportion of them, out of the market, if greater facilities were afforded to persons trading to Canton. In the article of cotton twist, there has been a growing demand; and one proof of its being very acceptable to the consumers is, that the Chinese spinners have become very jealous of it, and have tried to destroy it wherever they can find it. The Chinese are a very commercial nation, and in spite of obstacles presented by their government, trade would be carried on. The Americans have pushed the trade to a very considerable extent, and to an extent to our disadvantage; their trade is not so great as it was, on account of the cessation of hostilities: during the war they carried on the whole trade between Europe and China. If the trade were unrestricted, merchants would take out manufactures to India or China direct; if to India, they would there take in opium or cotton for China, and the same vessel might immediately come with a return cargo of tea to this country. The persons that go from Calcutta to Canton do not appear to fall into disputes with the Chinese.

The trade to China should be as free and open as possible, with the only limitation arising from the peculiar nature of the Chinese, the apprehension of collision with them, and perhaps the advantage to be derived from having an intermediate body to deal with in the purchase of tea, in preserving it free from adulteration. Referring to the exclusion from Japan, a country somewhat similar, it is doubtful whether the agency of the Company ought not to be used in the purchase of teas. Their factors might, through the Hong, purchase the tea on a rated allowance per lb., or a per centage; and there is no doubt that, the general trade being left entirely free, merchants would purchase the tea of the Company and bring it to England, and that by this mode every thing connected with China might be carried on with safety. The only questionable point in an entirely open trade, is the possible collision between the private purchasers and the Chinese sellers of tea. A provision, however, should be made in any new Act, that if it were found expedient at any time to throw open the purchase of teas, even that should be taken away from the Company, because a monopoly trade of any kind is not justifiable, except on the sole ground of its being dangerous to the existence of the trade itself to remove the restriction

Palmer, 1426

Bracken 1896

1910

Lapent 1973

1942-1995

restriction. In all ordinary trades, with ordinary nations, individual enterprise and skill will best accomplish the object; but considering what is known of the Chinese, and that the evidence is so conflicting, it would be extremely desirable to interpose in the purchase of tea a united body like the Canton factory to negotiate with the Hong. It would oppose a combined strength to the combination that exists in the Hong, and prevent an undue enhancement of prices, or excess of charge on the tea; and above all, it would prevent the adulteration of the article itself. The very danger to which we are now subjected in China shows the inexpediency of a consular establishment; for the recent collision is to be attributed, perhaps in a great degree, to the diplomatic or non-mercantile character of the present factory. The young men sent out are highly educated, and their feelings are more alive to the honour of their country and the political position in which they consider themselves placed, than influenced by the mercantile views which ought to govern them. Any thing in the nature of a consular establishment would at once bring the British into contact with the Chinese government, in which case we should be bound not to pass over insults which might be offered by the arrogance of the latter, and which might ultimately produce hostility; and a war to force a trade would not only be exceedingly questionable in its principle, and enormously expensive, but very problematical in its result.

Hall, 2562

If the Chinese trade were thrown open, and the tea trade confined to ports having bonded warehouses and docks, the revenue on tea would not be subject to any insecurity whatever. The St. Katherine's Dock Company could collect the revenue upon every article deposited in the docks, for the Crown, at a great saving of expense. The tea would be weighed on landing, and the chest emptied and tared, unless a fixed tare were agreed upon; the net weight of the tea would then be obtained, and the quality being valued on which the duty would be payable, provided the duty were taken on the landing weight, it would be inserted in the books of the Dock Company. There would be no difficulty in their selling the tea, and collecting the duty *ad valorem*. Competent persons might be found to judge of the tea, as the East-India Company's warehousemen do. If there were any combination among parties to sell or value the tea at too low a price, the revenue officers might take it for the Crown.

Currency.

Mackenzie, 312

THERE should be one currency for all India, and that should be equivalent to the Madras rupee, as a rupee of that value is the most extensively circulated. There would be the saving to government of the expense of a re-coinage, in the case of a remittance, which frequently happens, of money from one part of the country to another; and the loss and inconvenience to private merchants would be obviated. Now, the rupees of one place are received merely as bullion in the other; and, excepting at the mints, are not legal tenders at all. If there were but one currency, the mint expenses might probably be reduced, and perhaps the Madras mint abolished. Any addition to the number of coins current would be a source of vexation and annoyance to the people, and the great object should be as far as possible to simplify the currency: the poorer classes are always subject to loss in exchanging money. The silver coin in Calcutta is the sicca rupee; the gold mohur is also a legal tender for 16 rupees, but as the relative value of gold has risen much (one-eighth) above the mint rate, and the mohur consequently may be sold sometimes for 18 rupees, it has ceased to be current, and therefore, practically speaking, the only legal tender is the sicca rupee. The value of gold has risen gradually since 1793, and there has been a considerable increase since 1814. Gold neither does nor will circulate to any extent as current coin in India, where silver forms the actual currency, and is a legal tender. It is doubtful whether it would be proper to introduce gold as the current coin. Since 1793, all other rupees than the sicca have been received at the mint but not re-issued by Government. If the deficiency on the old coins does not exceed about two grains, they are received as of full weight; if it exceeds that allowance, they are received only as bullion, but they are not subject to any mint charge

Palmer, 1331

Mackenzie, 327

charge for re-coinage ; whereas, since 1812, there has been imposed on other silver bullion a seignorage duty of two per cent. If the silver is below the dollar standard, which is five or six worse than the rupee, a charge is made for refining, according to the degree of inferiority : of late comparatively little coin has been taken for re-coinage. When the bullion is delivered into the mint it is examined, weighed, and passed through the fire, and specimens sent for assay. The proprietor receives a certificate of the amount of coin due to him, which is intermediately receivable in payment of Government demands, and the coin is issued in about three weeks. The coinage is at present very well executed by machinery from England.

Mackenzie, 632

The difference between the Calcutta and the Madras rupee is about 6½ per cent.

355

The Bombay is now of the same value as that at Madras ; it was formerly a trifle less valuable.

Silver should continue to be the currency, and gold be left to fluctuate as merchandise.

361.

There is no restriction on the export of the coin from India.

386

Copper money is issued at Calcutta at the rate of 64 for the rupee, which is above 100 per cent. above the value of the copper. Several millions of pieces have been struck, and the demand, it was understood, was not confined to Bengal, but extended to the eastward. There has also been a scheme under discussion for coining spelter, in the expectation of displacing the cowries now used as a currency in petty market dealings.*

641

Banks.

Messrs. Alexander made an attempt to establish a bank in the interior, at Bhaulnah, but it did not succeed.

135

There is only one private banking house in Calcutta that issues notes. There are only two private banks that issue notes at present ; the bank of Hindostan, of which Messrs. Alexander are proprietors, and which has been established sixty or seventy years, and the Union Bank, supported by an association of subscribers. There were two other banks ; one belonging to Messrs. Palmer, and another managed by Messrs. McIntosh, called the Commercial Bank, but they have ceased. The circulation of the Bank of Hindostan was at one time between £40,000 and £50,000 but their issues have been much contracted since those of the Bengal Bank have increased, and since the shock occasioned by the failure of Palmer's house.

Bracken, 180,3
Mackenzie, 529

The Government Bank was first established in Bengal in 1809 : it has been a source of great convenience both to the community and to Government, especially in Calcutta, where its notes have chiefly circulated. They have also afforded an advantageous means of remittance to and from the districts, and the necessity for bullion remittances has been much lessened. The circulation depends chiefly upon the Government treasuries which receive the notes. In the interior they are almost immediately paid into the Company's treasury, and although they furnish the merchants and the Company with a convenient means of remittance, they can scarcely be said to exist in the interior as a paper currency. Payments are made in such small sums, and the population is so poor, that there is scarcely room for a paper circulation. The currency used by native dealers is the coin of the country. The Bank does not keep accounts with individuals in the country, its transactions are confined to Calcutta. It is a bank of discount and of deposit, it does not allow interest on deposits. Its largest issues are in loans for three months or less, upon the security of the Company's paper. It also discounts Government bills, and private bills with two good names. The loans on Government paper are to the advances on private bills as 50 to 15 or 20. The average of the Bengal Bank

389-610

* As to Paper Currency, see Banks.

Bank paper circulation is about £800,000. The notes vary from 10 rupees to 20,000. The largest proportion of the circulation is in notes of 100 rupees and upwards. The greater part of the payments of 10 rupees even in Calcutta are made in coin, not in paper. The average dividend has been 9 or 10 per cent., and the stock sells at about 50 per cent. premium. There is no prescribed maximum of dividend. The bank is under a charter, granted by the Governor-general in Council, by virtue of powers vested in him by Act of Parliament; there is no other chartered bank. The chartered privileges are, that it can sue under its common seal, and that the proprietors are not liable beyond the amount of their subscription. Besides these privileges, the bank has the advantage of the resolution of Government to receive the notes of no other bank in payment of the Government demand. The taking the notes would be a recognition of their security, which the Government would not be justified in giving, without an inspection of the proceedings. The Government are in part proprietors; they advanced £100,000 out of £500,000. The share which the Government has had in the management has been advantageous to the public. Its proprietorship has not biased its conduct, as the largest possible dividend on £100,000 must be a matter of comparative insignificance to the Government. The capital is divided into portions of £1,000 each: no proprietor can hold more than ten. There are three directors appointed by Government, and six elected by the other proprietors. The president is elected by the directors, but he has always been a Government officer; he takes the lead in the business of the bank; he is elected once a year, but he may be re-elected. The Government directors are all official men. The other directors are generally, but not always, chosen from among the principal merchants. The private directors are sufficiently independent of Government to resist what they think wrong, and are in fact free agents, yet the Government directors have, from the force of their official situation, considerable influence over them. None of the directors are paid: natives may become directors. Some of the proprietors are residents in Calcutta, but a considerable number of them are retired civil and military officers. The Company's servants are allowed indiscriminately to be shareholders, and there is no objection to such permission. The proprietors can vote by proxy. Twice a year a statement of the affairs of the bank is submitted to the proprietors, and sent to the Government. It is not published, but it is read at a general meeting; that meeting, however, is seldom attended by more than one proprietor, besides the directors. There has been no collision between the Government and the other directors, but there has often been a good deal of discussion. The directors, or a part of them, meet once a week to examine the state of the accounts, to determine the extent and rates at which accommodation shall be given, and to settle other matters. In the intermediate days private bills offered for discount are sent in circulation in closed boxes, and refer generally to two of the private directors and to one Government director. Complaints have not unfrequently been made by the public with regard to discounts. At the commencement of the Burmese war, the bank, having large funds unemployed, subscribed twenty-five lacs to the loan then opened: they have not on any other occasion made advances to the Government. Afterwards, when the state of their funds rendered it necessary, the bank got rid of the Government paper by a re-sale, with the view of extending its loans and discounts; but it is considered that they had locked up on that occasion too much of their capital, which would have been better employed in loans and discounts. They have always held a certain sum in the Company's securities, but these have been generally purchased in the market from individuals. The amount however so held has sometimes been larger than it ought to have been, and it has been found that it could not be sold so easily as the bank wished when money was wanted. The bank has lost considerably by bad debts, and still more by forgery, the Company's paper deposited with them for advances having turned out to be forged. The bank do not act as Government bankers, the Government keep their own treasury quite distinct; but they frequently hold a considerable sum in bank notes. The general rule was, that there should be no accumulation of notes in the Government treasury, beyond what it was convenient to have for the transaction of business; and though it

was

was an object to avoid suddenly returning large sums upon the bank, or any measure that should unnecessarily interfere with the equal course of its operations, the end aimed at was the advantage of the public, and the promotion of the Government revenue, not the separate interest of the bank. The control exercised by the Government directors is the only direct control exercised by the Government over the bank, but it now holds its charter at the pleasure of Government. In 1823 it obtained a new charter for five years: under the old, the notes issued were confined to the amount of the subscribed capital, £500,000; and the cash fund was to be equal to one-third of the issues. Under the new charter the cash fund is reduced to one-fourth, and the notes issued may amount to £2,000,000 in value, but there has never been a demand nearly to that extent, though the former circulation was too restricted, and the notes sometimes bore a small premium. The Government formerly required the bank to lodge 20 lacs of the Company's paper in the general treasury as a security for the notes which the Government take, but that condition has been relinquished since the renewal of the charter in 1823. It is not necessary for the due execution of the financial operations of Government that they should have a bank to which they can occasionally resort for accommodation. It might be beneficial to reduce their balances, and apply to the liquidation of debt a sum that now lies idle in the treasury. In this way the existence of a wealthy bank, which could make advances equivalent to the demands against which the Government has now to reserve funds, would be a convenience, but it is not necessary. And it is, on the other hand, rather undesirable that the Government should rest upon a bank, from the danger that if it do so, it will often draw so much from it as to interfere with its advances to individuals. At the very time of difficulty, when it is pressed, it would come upon the bank, and that is the time when the bank should support the merchants. The bank might in a considerable degree supersede the general treasury as an engine of payment, and there might in that way be some saving of charge; but there is the danger of the funds being diverted from their proper use if the establishment became a Government Bank. It would be unsafe for the bank to be exposed to all the demands which the Government has to meet, unless (which would defeat the object of the arrangement) the bank kept in its coffers the money which the Government now reserve in their treasury; for the demands upon the Government are too uncertain, and too large, contrasted with the ordinary commercial transactions of the bank, to allow of its applying the same principle to both; and embarrassment would probably result from the Government being too large a customer for a bank of so small dimensions. The interference of Government through its officers, as directors, has been very useful, and should be continued, but not for the purpose of inducing the bank to make advances in aid of the public resources. The object should be to see that the business of the bank is so conducted as best to promote the commercial interests of the place, including the important dealings of the salt and opium merchants. In that way Government is much interested in the management of the bank, and it should not look to getting a direct advance. The establishment of other chartered banks would diminish the value of the present bank stock, but the effect would depend principally upon the Government receiving their notes in payment of its revenue. The Government ought not to refuse a charter to another bank, because it is part proprietor of the present bank; but before chartering a bank, it seems to be necessary to fix precisely the rules on which it is to be conducted, and the subscribers should be required to allow their dealings to be controlled by the Government, for a charter from the Government would in India give a bank the character, to a certain extent at least, of a Government institution. With that proviso, there is no objection to perfect freedom of banking in India.

There is no bank at Madras precisely similar to that at Bengal.

And there is no bank at all at Bombay. Some years ago the Government proposed to establish a bank there; but the proposal was disapproved by the home authorities, and their opinion appeared to be generally averse to having new banks established by authority. Their reasons were, the danger of abuse; the difficulty of exercising an effectual

Mackenzie, 486

control; and the apprehension that the grant of a charter must, in the public estimation, constitute a bank a Government concern, even though they should have no other connection with it. It was also thought that the circumstances of Bombay did not require the establishment.

Remittance.

233

298

298

245

626

THERE ought not to be any difficulty in remitting to England the supplies necessary to meet the Government payments. In order to remit a certain amount, it cannot be necessary for the Company to trade. The facility of remittance by bills must depend on the course of trade. The discontinuance of the Government trade in India, and the freer settlement of Europeans there, would cause commerce to improve, so that not only there should be no increased difficulty, but additional security and means of remitting. The goods imported by the Company must take the place of goods that would be imported by individuals. A remittance to England might be advantageously made through China, as is now in fact done by the Company, the drafts of the Supracargoes on the Bengal Government forming virtually a remittance from Bengal to England. The trade in opium, of which the proceeds in China are upwards of two-and-a-half millions, seems to afford a large means of remittance by way of China, so long as England shall have to pay a balance to that country for tea, &c. The Government should look to the rate of a bullion remittance, and if they could not get good bills at a rate as advantageous, they should import bullion. Prices would then change, and the consignment of goods, against which bills would be drawn, would become profitable. The amount of bills required should be periodically advertised, and tenders invited, both in this country and in India, with the understanding that none would be accepted at rates less advantageous than a bullion remittance. Any delay that might occasionally arise from the necessity of remitting bullion might be met by temporary loans from wealthy individuals or establishments. If secured by goods, bills would be safe from whomsoever taken, but bills drawn or accepted by wealthy individuals might be taken without security. In some cases the security of fixed property in India might be given; and when the bills of lading are required, it would be too strict, as a general rule, to advance only three-fourths of the value. But in the present condition of the trade of India there are circumstances which may require particular precaution. If a discretion were left with the officers employed to purchase bills, they might exercise it so as not to injure private credit, and yet to secure the Company, provided they acted upon a broad rule, that no bills should be taken to which the slightest doubt attached. The money market of London, and the credit of English houses might be greatly relied upon when once the system of remittance was established as a permanent arrangement. One essential facility would result from the connection between persons settled in India and respectable houses at home, who would grant credits to enable them to negotiate bills, as funds might be required by them in India, in the same way as Americans and French now take to Bengal letters of credit from houses in London. There is no sufficient ground of objection to the export of bullion from India; but the state of the two currencies, that of England being gold, and that of India silver, renders the out-turn of remittances from the latter somewhat uncertain. It is difficult to say what the comparative value of the rupee now is, and India must suffer by the price of silver bullion in England. When the Government offered to buy bills in Calcutta, a difficulty was experienced in getting them, at any rate which they would accept. Whether the trade between India and China were conducted by a free competition of individuals or through the agency of the Company, would not directly make any difference as to the means of India to remit home, but indirectly, if the exports from England to China increase very greatly, the balance of trade between China and England may be so altered as to render China no longer a part of the chain between India and England; because if England fulfils its obligations to China by goods, that will for a time at least get rid of the necessity of making use of the bullion due by the latter country to India; and *vice versa*, if, by an enlarged export from China to Europe, the debt due to that country be increased, then the trade between China and India may be expected to be still further used as a means of remittance to England

England. There is no reason to suppose that if the Company's trade were to cease, there would be combinations among the mercantile houses so as to command the rate which the Government should pay for remittance; and if the resort of Europeans were unrestricted, there would probably be more mercantile houses and less of monopoly than there now is.

The financial remittances to this country might be made with perfect facility, without the Company carrying on trade. Three millions and a half might be remitted without difficulty from China and India together; and the mode in which it should be done would be with reference to bullion and the general exports. The trade itself will furnish a value of three and a half millions as at present existing; and if bills of exchange secured upon that trade were tendered to the Company at the bullion price, there is no reason why those goods should not be deposited in the possession of the Company until the bills were paid. The invoice value of the goods upon which this opinion is formed, is nearly three and a half millions from Bengal, and two from China. The remittances ought to be effected at the bullion price, from 1s. 11½d to 2s. per sicca rupee. A bill at the same rate of exchange which bullion would give, is preferable to bullion, from the security of the payment of the bills by the triplicate copies, and that notwithstanding the facility of insurance, because there are always legal questions to which the holder of a policy of insurance is liable. The import of bullion into this country from India is likely to be extended, because the goods sent out within the last ten or twelve months have been remitted home by bills at six months, at from 1s. 10½d. to 1s. 10¾d. per sicca rupee, whereas rupees or other silver bullion would give 1s. 11½d. and upwards per rupee, and therefore orders have been transmitted from England to remit the bullion. The remittance from China for manufactured goods sent out is so small as not to attract notice. From the well founded apprehension that an export of coin will produce a scarcity of money, an attempt has been made by the Indian merchants to retain the bullion in India, which it is quite impossible for them to do. They have an idea that they can regulate the remittance by fixing arbitrarily their own rate of exchange. Commerce would not be promoted by the introduction of our coin into India: it is immaterial what the coin is, when the fineness is known. It would be beneficial that the same legal standard should prevail in England and in India, and indeed in all countries. The capability of the Company to draw bills on India, and dispose of them to merchants in this country, would depend a good deal upon the state of their own imports from India and China: if they are not importers of produce, a considerable portion of the funds necessary in England might be obtained by their own bills on the treasuries in India: to a certain extent, such a mode of remittance would afford accommodation to the private merchant, especially in so far as may relate to the European and foreign capital embarked in the India and China trade. But in trade with distant countries the exchange operations generally originate in the distant country and not in London. The consequence of the measures originating in India, and the parties not taking any quantity of money or bills from hence, would be to throw an excessive amount of bills into the market of India, which might so raise the exchange as to force bullion from this market for the purpose of meeting those bills, in the event of their not being readily taken out of the market for the Company's remittances to Europe. No bad effect need be apprehended from combination among the mercantile houses to raise the price of remittance, as it is presumed that the Company will at all times order bullion to be transmitted, if bills are not procurable at the bullion rate. The people of India, however, may suffer very considerable pecuniary distress by the sudden withdrawing of bullion from a country only supplied with it from a distance. It is very doubtful whether, if the Company ceased to trade, any great increase would take place in the number of mercantile houses in Calcutta. The Company would not, and could not, with safety, take the bills of any house without collateral security; and to prevent reflections upon individual credit, there should be a general rule always to take security. The transactions, however, should still be with houses of credit, otherwise the Company would have imposed upon them the duty of examining more nicely than might be convenient the quality of the goods that were shipped, and the correctness of the invoice cost.

Palmer, 123

Bracken, 1798

The number of mercantile houses in Calcutta is not sufficiently small to produce any thing like a combination to influence the exchange unduly. There are now thirty or forty, having different interests; but if a combination were to take place, Government could always check it by remitting in bullion. Competition is more likely to arise than combination. Independently of the European houses, there are several Native establishments which, from their comparative cheapness, transact a great proportion of the American business. These Natives constantly take American bills, which they sell to the houses of agency, and it would be in the power of Government to purchase those bills.

1870
1821

The bills of from twenty to twenty-five of the mercantile firms might be taken without other security than their own credit. If the China trade were thrown open to Europeans, one of the channels of remittance would be by sending Indian produce to China, purchasing cargoes of tea, and drawing upon England for the proceeds of those cargoes; but if the exports and imports between London and Canton equalized each other, China would still have to pay Calcutta for its opium, and the proceeds of that opium, even if all the tea sent was paid by the manufacturers of England, would still be available to be returned to Calcutta, or sent on to England in bullion. Whatever facilities opium now affords as a remittance would still be afforded. It would be only a matter of calculation whether it were better to send the value of it back directly to Calcutta or on to London. If the restrictions on the resort of Europeans to India were removed, it is probable that British capital would be transferred to India; and in that case the Government would certainly be able to sell in London the bills on India, as a mode of furnishing that capital in India. There could not be any great demand in this country for bills on India, unless parties were desirous of transferring capital for the purchase of lands or other permanent investment in India. In some cases it might be more advantageous for persons in London to get a bill on the Bengal Government, rather than a letter of credit from an agency house; but letters of credit have this advantage, that you do not take up money unless you want it.

Lapent, 1841.

The amount to be provided for in India for remittance to England is taken at seven millions, and recourse must be had to a combined operation with China, for the purpose of bringing that sum home. The plan of taking bills, and at the same time the security of goods, would not be operative to any great extent, except in a peculiar and distressed state of the money market of Calcutta. The exchange never can be much above a bullion exchange. About ten mercantile houses in Calcutta are considered as of undoubted character and extensive connections and means. The Company could procure by tender the bills which they would want. It is difficult to attempt to enter into the details of what may be required in adopting a new system; but if it were left to the agency of commerce to make remittances to this country, checks would, on the one hand, be instituted by the Government, and securities would, on the other, be afforded by the commercial body; with due vigilance, and under a fair exercise of competition, both parties would, no doubt, be able to accomplish the object.

[For remittance by Silk, Indigo, &c. see those heads]

APPENDIX, No. IV.

ANSWERS to **QUERIES** proposed by the Board of Control, upon Subjects relating to the **TRADE WITH INDIA.**

LIST OF QUERIES.

- I.—**WHAT** facilities have been afforded to persons trading with India, since the opening of the Trade in 1814, by the repeal or modification of Duties or of Regulations in India injuriously affecting the Commercial Transactions of Individuals?
- II.—To what extent has the Trade with India increased since 1814, and with regard to the Exports from Great Britain, what degree has the Increase consisted of British Staples?
- III.—What is the system pursued by the Company in the conduct of their Commercial Transactions in India, whether in the interior or at the respective Presidencies?
- IV.—What are the practical effects of the union of Government with Trade in India? In point of fact, have the powers of Government been employed to place rival Merchants under any unfair disadvantages in Trade? Has rivalry in Trade been found to be productive of any undue bias to the proceedings of the Government as a government, when rival Merchants are concerned? If any inconveniences to the public do in fact arise from the union of the two operations, do they or do they not outweigh the advantages to the Company?
- V.—What is the system pursued by the Company in the conduct of their Commercial Transactions in England; and have their proceedings proved prejudicial or advantageous to the general interests of Indian Commerce?
- VI.—Does the necessity of their effecting a large Remittance to England without primary regard to profit operate detrimentally or advantageously upon Commerce, and to what extent; and could a similar remittance be conducted through private agency, and with what effects?
- VII.—In what modes and upon what terms have Remittances been effected between England and India, or India and England, and between the principal places of Commerce in India and Asia, with each other; and to what extent and with what degree of regularity are the operations of Foreign Exchange and Remittance conducted by European or Native Merchants as a distinct or separate business?
- VIII.—Whether and by what means the Funds required for Territorial purposes in England could be regularly supplied, and the Government effectually secured from loss by bad bills, were the executive authority in India to cease to carry on Trade, and at what rate is it to be expected that such Remittances could be realized?
- IX.—What are the present arrangements with Foreign States in regard to Trade with India, and can any improvements be suggested in those relations?
- X.—Are there any and what benefits derived by the Revenues of Great Britain from the present system for conducting the Trade with India and China, which would be lost by a change of system?
- XI.—Can any measures, not involved in previous questions, be suggested calculated to advance the interests of Indian Commerce; such as the improvement or increase of the exportable productions of India, &c. &c.?

APPENDIX.

No. 4

continued

Trade with India
Answers to Queries

QUERY I.—WHAT facilities have been afforded to persons trading with India, since the opening of the Trade in 1814, by the repeal or modification of Duties or of Regulations in India injuriously affecting the Commercial Transactions of Individuals?

Mr. Larpent

Answer.—THE import duties on the manufactures have been reduced to $2\frac{1}{2}$ per cent. *ad valorem*, and many of the staple articles admitted free of duty.

Regulations have been made to prevent, if possible, the injury sustained by the private merchant when in competition with the Company in the provision of silk, and the purchase of other articles.

Transit duties have been modified and drawn back in many instances.

Permission is given under the Regulation of the 7th May 1824, then applicable to coffee, subsequently extended to indigo, to British subjects to hold lands in their own names on leases for sixty years.

Liverpool East-
India Committee

The modification and partial repeal of duties which took place in India immediately after the opening of the trade in 1811, we believe to have been a measure contemplated and agreed upon at that period between the Government and the East-India Company on the renewal of the Charter; since that period we are not aware that any facilities have been afforded to persons trading with India, beyond the removal of the restriction upon British ships under 500 tons from trading to India, which took place in 1823, through the interference of Parliament.

Mr. Sullivan

Since the opening of the trade in 1814, all inland duty on cotton has been taken off; when exported to China the duty has been lowered to five per cent., and if the cotton is exported to England, no duty whatever is levied.

The Honourable Company's cloth investment has been discontinued for some time, all the weavers to the southward have been at the private merchants' command, to make up any quantity of cloth they might wish for.

Mr. Bracken

The facilities in Bengal, with which part of India I am more particularly acquainted, have been very few and very recent. After numerous applications, the most vexatious clauses of Regulation XXXI. of 1793, were repealed by Regulation IX. of 1829.

The local government ~~relieved~~ commerce, also, of some inconvenience by substituting bonds in lieu of cash payments for the transit duty on indigo. Previously, cash was paid at the custom-house nearest to the place of manufacture; and a drawback was allowed to the full amount, less fees on exportation. I have heard that a reduction has been made since I left Calcutta in the rates of pilotage, applicable to vessels taken to sea by steamers. I am not aware of any other facilities to the trade in India

Mr. Crawford

By the Charter of 1813, no British ship could clear out from a port of the United Kingdom (but she might from any foreign port) to any principal port of British India, which were four in number, without a license from the East-India Company, or to a subordinate port, without a special license, and after having first visited and cleared out from a principal port. By the construction put on the Act, the trade to British registered private ships from port to port, or the Indian carrying trade, was erroneously deemed to be illegal.

The

The Indian trade was altogether interdicted to private ships of a less burthen than 350 tons, under pretext of danger from piracy and smuggling, a fear which the experience of the last nine years has shown to have been utterly futile and groundless; and fees were demanded at the India House for licensing all vessels, the amount of which from 1817-18 until 1822-23 inclusive, appears to have been £6,714. 15s.* These absurd and pernicious restrictions were persevered in for ten years after the passing of the Charter Act, and finally removed only through the interference of Parliament on the recommendation of Committees of both Houses.

With respect to the condition of British merchants on their arrival in India, although all the laws and regulations relating to the residence of British-born subjects stand unrepealed, as they existed in 1818, many of them have, through the increasing liberality of successive local administrations, become in a great measure a dead letter, always however excepting the most important, the prohibition to hold land or take a legal security upon it. From this liberality, however, the entire territory of Madras must be exempted, where, from all accounts, the ancient rigour of the restraints on the settlement and freedom of British-born subjects are at the present moment in as full force and operation as in 1814, or even before that period.

With respect to duties, the Statute of 1813 enacted, that no new tax should be imposed without the sanction of the home authorities. A new schedule of reduced duties was accordingly transmitted from England, and passed into a law by the Indian governments in 1815. Fortunately for the commercial intercourse with Great Britain, the rate of duties then adopted has in general been steadily adhered to.

There has been one positive act of the local government of India highly beneficial to the commercial intercourse of Great Britain with India, to which it is necessary to refer—the establishment of a commercial emporium at Singapore, and the exemption of merchandise from all imposts, both at that and the neighbouring settlements. This measure has been the means of opening a commercial intercourse with some countries of Asia, with which Great Britain had no commerce for several ages, and of greatly extending our trade with others, with which we had previously very little.

A free port has been created at Singapore, and the prohibition of the use of ships under 350 tons burthen has been removed; both of them measures of great moment, and followed by commensurate advantages.

Manchester Chamber of Commerce, and East-India Committee

We beg to refer for an answer to this Question to the evidence taken by the Committee of the House of Commons last session of Parliament.

Glasgow Chamber of Commerce

The admission of woollens, metals, and marine stores into India, free of duty, has undoubtedly given great facility to the trade in these articles; and much benefit has also been felt to result from the removal of the restrictions on the size of ships, and on what is called the circuitous trade.

So far as the East-India Company are concerned, it appears to me that every facility has been given to the trade with India calculated to promote its increase, the duty on imports into India of British manufacture being moderate.

Mr. Mackillop

We believe that no facilities have been afforded to persons trading with India since 1814, with the exception of a trifling modification of the duties at that time agreed upon between the Government and the Company, and the removal of the restriction upon British ships under 350 tons, through the intervention of Parliament.

Hull Committee

QUERY

APPENDIX,
No. 4.
continued.
Trade with India
Answers to Queries.
Mr Larpent

QUERY II.—To what extent has the Trade with India increased since 1814, and with regard to the Exports from Great Britain, what degree has the Increase consisted of British Staples?

Answer.—In the Account No. 3, Papers presented to Parliament 4th June 1829, the amount of value of British manufactures exported in 1814-15 to all parts of India, &c. (excluding China) by the East-India Company, was £ 787,961
Private Trade 1,048,132

Say Parliamentary Papers, 9th Feb. 1830, No. 37.

1814: East-India Company 826,558
Private Trade 1,048,132

£. 1,874,690

By a Statement taken from my own accounts of the export trade of the United Kingdom to Bengal, Madras, and Bombay, I calculate the amount of exports in the year 1830 to be £3,032,658, of which the British staples were as follows:

Exports 1814-15.				Prices in 1814.		Prices in 1830.			
			£.	£.	£.	£.	s.	£.	s.
239,822	Copper		414,463	120 to 140	90	0	to	94	0
109,927	Iron		84,298	7 to 9	4	15	to	5	5
4,379	Tin Plates		8,180						
12,143	Lead		22,312	28 to 34	13	0	to	15	0
7,766	Steel		13,622						
372,037	.. .. .		542,875						
109,480	British Cotton Goods		1,241,763						
23,434	Linen		8,760						
255,364	Woollens		259,237						
7	Yarn		278,610						
760,322	.. .. .		2,331,245						
71,899	{ Ironmongery, Hard-ware, &c. .. }		60,000						
832,221		£	2,391,245						

Calcutta, Madras,
Bombay.

The *real* value of the imports from India in 1830 appears to be ... £4,199,039*

The amount of the imports during 1814† are before Parliament; but in judging of the *values*

* Goods £3,384,039
Bullion 815,000
£ 4,199,039

† In 1814, 48,643,275, including all places except China. In 1829, £6,218,284, including all places except China.
—Per Parl. Papers.

values at the two periods, the great difference in price on all articles, whether British or Indian, exported or imported, should be duly considered, prices in 1814, at the termination of the war, being 100 to 200* per cent. above the present.

APPENDIX,
No. 4.

continued
Trade with India.
Answers to Queries.

IMPORTS from all Places Eastward of the *Cape of Good Hope* (*China* excepted), into the United Kingdom.

	1814.	1829.	Prices 1814.	Prices 1829.
Coffee lbs.	7,944,445	6,335,257	s. s. 112/ to 145/ per cwt.	s. s. 32/ to 43/ per cwt.
Cotton Piece-Goods pieces	1,286,612	1,345,732		
Gums lbs.	434,008	1,316,501		
Laclake dye, Seedlac, Shel- lac, and Sticlac }	—	—		
Hemp cwts.	30,937	26,430		
Dutch Cardamums lbs.	31,977	31,948		
Cassia Buds and Lignea lbs.	173,988	900,473		
Dutch Cinnamon .. lbs.	276,982	543,933		
Dutch Cloves .. lbs.	262,201	36,061		
Cotton Wool .. lbs.	2,850,318	24,924,410	14d. to 21d. per lb.	3½d. to 5d.
Ginger cwts.	—	4,917		
Indigo lbs.	6,752,302	5,980,212		
Dutch Mace .. lbs.	104,815	6,833		
Madder or Munjeet cwts.	1,219	2,135		
Dutch Nutmegs .. lbs.	322,134	37,022		
Pepper lbs.	5,762,649	2,006,579	12d. to 19d.	2½d. to 3½d.
Silk lbs.	965,414	2,116,596		
Silk Piece Goods .. pieces	71,502	95,849		
Silk Manufactures .. pieces	31,115	23,672		
Rice cwts.	134,059	192,366		
— in the husk .. bushels	—	61,835		
Safflower cwts.	843	2,689		
Saltpetre cwts.	146,512	176,150	s. s. 46/ to 90/ per cwt.	s. s. 24/ to 33/
Sugar cwts.	43,789	497,109		

EXPORTS

* See following Statement.

EXPORTS from *Great Britain* (of the following Articles) to all Places Eastward of the *Cape*, with the exception of *China*, during the Year 1814.

		DECLARED VALUE.	
			TOTAL.
		£.	£.
Copper, unwrought cwts.	9,164	52,600	
—— wrought —	28,455	187,222	239,822
Brass —	537	5,524	5,524
Iron, bar and bolt tons	7,654	107,927	
—— cast and wrought cwts.	33,374	55,154	163,081
Cutlery and Hardwares	—	26,883	26,883
Lead and Shot tons	476	12,143	12,143
Steel, unwrought cwts.	5,166	7,766	7,766
Tin and Pewter Ware, and Tin Plates ..	—	4,379	4,379
Woollens, Cloths of all sorts pieces	12,569½	215,815	
—— Stuffs, viz. Gamblets —	5,221	24,999	
—— other Woollens —	—	14,550	255,364
Cotton Goods :			
Calicoes, white or plain yards	82,638	11,341	
Ditto, printed, checked, stained, dyed —	597,595	59,206	
Muslins, white or plain —	130,770	19,476	
Ditto, printed, checked, stained, or dyed —	7,205	894	
Hosiery and small wares —	—	18,563	109,480
Yarn lbs.	8	7	7
Linen Manufactures —	—	23,433	23,433
	£.	847,882	847,882

EXPORTS from Great Britain to India in 1830.

Trade with India
Answers to Question

	FROM LONDON TO		FROM THE OUTPORTS TO		TOTAL.
	Madras and Calcutta.	Bombay.	Madras and Calcutta.	Bombay.	
Cotton Goods :	£	£.	£.	£.	£.
Cambrics	5,360	4,490	—	—	9,850
Muslins	12,100	32,900	270	—	45,270
Long Cloths	7,580	20,800	—	—	28,380
Cotton Shawls	1,300	280	—	—	1,580
Jeans and Dimities	1,400	1,500	—	—	2,900
Printed Cottons	—	—	133,156	194,000	327,156
Coloured ditto	—	—	9,509	12,600	22,109
Plain ditto	—	—	387,848	416,979	804,827
Cotton Yarn	—	—	238,802	38,200	277,002
Cotton Thread	—	—	1,500	110	1,610
Cotton Lace	—	—	—	250	250
Linen Goods :					
British Linens	2,970	950	2,600	600	7,120
Irish ditto	560	—	390	—	950
Sail Cloth	6,000	1,800	480	550	8,830
Woollen Goods :					
Woollen Cloths	58,000	28,000	81,827	56,400	224,227
Blankets	250	360	910	640	2,160
Flannels	1,320	180	2,700	1,300	5,500
Carpets	Included in "Sundries not enumerated."		375	—	375
Baizes			—	2,800	2,800
Articles of mixed or doubtful Material :					
Stuffs of Silk and Worsted	1,650	1,630	—	—	3,280
— of all descriptions	—	—	16,200	11,000	27,200
Haberdashery	3,100	2,520	654	450	6,724
Millinery			—	—	
Laces	1,250	230	450	—	1,930
Hosiery	1,600	1,230	2,400	—	5,230
Wearing Apparel	2,600	1,880	150	190	4,820
Slops	300	50	150	—	500
Shawls	—	—	—	450	450
Cordage	880	260	—	—	1,140
Hardware	Included in "Sundries not enumerated."		14,454	4,484	18,938
Ironmongery			700	940	20,740
Iron Cables	640	850	560	—	3,550
Anchors	1,500	—	—	—	—
Shot	—	—	540	390	930
Cutlery	4,800	1,800	1,730	190	3,520

(continued)

EXPORTS from *Great Britain to India—continued.*

APPENDIX,
No 4.
continued
Trade with India
Answers to Queries.

	FROM LONDON TO		FROM THE OUTPORTS TO		TOTAL			
	Madras and Calcutta.	Bombay.	Madras and Calcutta.	Bombay.				
	£.	£	£.	£.	£.			
Surgeons' Instruments	5,200	2,750	—	—	7,950			
Tin and Japan Ware	670	500	—	—	1,170			
Glass, Brass, and Plated Ware	10,850	7,700	—	—	18,550			
Printing Types	1,430	670	—	—	2,100			
Guns and Pistols	2,500	600	300	20	3,420			
Earthenware	3,850	1,150	5,755	2,943	13,698			
Glassware	12,600	3,520	13,450	490	48,690			
Window Glass	16,330	2,400						
Glass and Earthenware	650	100	—	—	750			
Looking Glasses	570	1,100	—	—	1,670			
Bottles	9,600	1,720	5,390	4,700	21,410			
Mathematical Instruments }	800	{	—	—	930			
Optical ditto	130		—	—				
Clocks and Watches	2,500	2,900	—	—	5,400			
Jewellery	12,360	440	680	280	13,760			
Silver Plate and Plated Ware	12,700	3,550	1,310	290	17,850			
Gold and Silver Lace	6,350	630	—	—	6,980			
Buttons	150	—	—	—	150			
Toys	1,600	850	30	—	2,480			
Umbrellas and Parasols	950	150	950	95	2,145			
Carriages and Harness	2,150	4,200	—	—	6,350			
Leather (tanned and dressed)	1,630	340	650	—	2,620			
Leather Gloves	450	240	—	—	690			
Boots and Shoes	1,220	1,700	—	—	2,920			
Saddlery	6,680	2,530	2,890	460	12,560			
Hats	11,100	1,780	567	—	13,447			
Musical Instruments and Printed								
Music	9,200	900	—	—	10,100			
Stationery and Books	43,650	12,650	2,770	780	59,850			
Perfumery	4,670	2,400	20	—	7,090			
Soap	1,200	470	—	—	1,670			
Apothecary Wares, &c.	11,700	3,850	—	—	15,550			
Confectionary	5,800	1,550	30	50	7,430			
Groceries	3,000	900	—	—	3,900			
Oilman's Stores	10,350	3,150	800	—	14,300			
Painters' Colours	{	1,150	{	2,110	1,750	{		
Linseed Oil							1,780	90
Turpentine							—	—
White and Red Lead	2,300	590	1,050	350	4,290			
Tar	—	—	900	—	900			
Gunpowder	{	Included in "Sundries not enumerated."	{	300	—	300		
Coals				730	2,120	420	—	3,270
Provisions	7,900	1,950	—	—	9,850			
Hams	—	—	1,500	15	1,515			
Cheese	—	—	280	130	410			
Salmon and Herrings	—	—	120	—	120			

EXPORTS from Great Britain to India—continued.

APPENDIX.
No. 1.
continued
Trade with India
Answers to Questions

	FROM LONDON TO		FROM THE OUTPORTS TO		TOTAL.
	Madras and Calcutta.	Bombay.	Madras and Calcutta.	Bombay.	
	£.	£.	£.	£.	£.
Spirits	9,000	3,040	1,210	478	13,728
Wines	42,000	12,200	3,464	1,015	58,679
Beer, in casks	38,000	23,800	5,855	450	72,405
— in bottles	3,100	1,200			
Ale	—	—	3,644	370	4,014
Corks	1,700	550	20	30	2,300
Sundries not enumerated ..	36,000	13,600	5,000	1,500	56,100
	487,290	235,260	959,912	758,720	2,441,182
Metals					
Copper	220,424	38,635	128,320	27,084	414,463
Iron	24,619	24,573	21,342	13,764	84,298
Tin	—	—	—	—	—
Tin Plates	3,784	2,596	1,350	450	8,180
Lead	19,318	955	1,459	580	22,312
Steel	2,192	10,894	6	530	13,622
Quicksilver	13,319	2,720	170	—	16,209
Spelter	25,389	3,916	3,129	—	32,434
	309,045	84,289	155,776	42,408	591,518
TOTAL EXPORTS including Metals	796,335	319,549	1,115,688	801,128	3,032,700

It has increased very considerably, particularly with Bengal and Bombay:

Mr. Bland

	Imports.	Exports.
BENGAL.		
1813-14	£ 877,917	£2,767,624
1827-28	2,232,725	4,898,018
BOMBAY:		
1813-14	92,698*	305,154
1827-28	819,693	508,592

In the year 1828-29 there was still a greater increase at Bombay: the imports amounting that year to £781,248, and the exports to £833,767. In the same year there was a decrease in the whole import and export trade of Bengal with Great Britain of £421,364, occasioned by

* This sum has been converted from the Bombay rupee, at the same rate as the sicca; although there is a difference of seven or eight per cent. in their value.

by the decreased exports of the East-India Company * ; otherwise there would have been an augmentation ; the private trade having increased £260,604.

The trade of Great Britain with Madras has also increased, but not to the same extent.

	Imports.	Exports.
In 1813-14	£271,749†	£436,513
1827-28	258,740	715,873

Of the increased exports from Great Britain to India since 1814, a large proportion is formed of British staples and manufactures, embracing British capital and industry. The following particulars are not unworthy of attention, more especially cotton twist :

STATEMENT showing the Value of the Principal Articles of Export to India, in 1814 and 1828.

ARTICLES.	1814.	1828.	INCREASE
	£.	£.	£.
Apothecary's Wares	19,611	29,283	9,672
Apparel	13,879	31,204	17,325
Beer and Ale	50,022	99,037	49,015
Carriages	5,535	16,945	11,410
British Cotton Manufactures	109,480	1,621,560	1,512,080
Ditto Cotton Twist ditto	7	388,888	388,881
Earthenware	10,747	26,625	15,878
Glass	68,443	114,978	46,535
Guns and Pistols	52,220	96,719	44,499
Haberdashery	16,745	40,331	23,586
Hardware and Cutlery	26,883	78,765	51,882
Iron, bar and bolt	107,927	155,038	47,111
Ditto, cast and wrought	55,154	102,629	47,475
Lead and Shot	12,143	32,022	19,879
Leather and Saddlery	21,637	46,187	24,550
Linen Manufactures	23,434	36,120	12,686
Machinery	6,043	103,676	97,633
Plate, &c.	13,503	50,900	37,397
Spelter‡	Nil.	59,486	59,486
Stationery	38,494	84,735	46,241
Tin and Pewter Wares	4,379	8,947	4,568
£.	656,286	3,224,075	2,567,789

* £683,070.

† As above.

‡ In 1827, the exportation of spelter to Calcutta was much larger, £104,823

This question will be better answered by official returns than by any reply which I can give to it. I am not aware that the documents which would furnish this information in a complete and satisfactory form, are as yet before Parliament or the public. The trade between Great Britain and India, to be fairly stated, ought to be given for a series of years in two periods, and to embrace all countries to which the East-India Company had an exclusive trade before 1814, classifying and distinguishing the exports to and imports from each particular country. The exports to and imports from China, the only country with which the monopoly is entire, ought to be stated for the same periods, in order to exhibit a just comparison between the results of the close and open trade.

The increase which has taken place in the exports from Great Britain to India since 1814, is, I believe, unparalleled in the history of commerce. In 1814 they amounted to £1,874,690 declared value, and in 1828, the last year which the public documents in my possession enable me to quote, to £4,467,673, showing an augmentation of £2,592,983. This sum, however, does not express the actual increase. The currency in which the value of the exports of 1814 was expressed, was depreciated below the standard metallic value, and of course the value in 1828, by between 25 and 26 per cent. Mushet's Tables, quoted by Mr. Tooke.—High and Low Prices, Appendix, No. 1. The actual exports of 1814, therefore, were £1,403,362, so that in fourteen years' time the increase was more than threefold, not to say that the prices of 1814 were high war prices, and those of 1828 low peace prices.

The exports have generally consisted of British staple manufactures, and the following short enumeration will show the increase between 1814 and 1828; it being recollected that a considerable portion of the exports of the former year resulted from the free trade, during near nine months of which it had been in operation.

	1814.	1828.	Absolute Increase	Increase per cent.
Copper (wrought and } .. cwts.	37,619	41,742	4,123	10·95
unwrought, .. }				
Iron, bar, bolt, and cast	186,454	438,629	252,175	135·19
Lead	9,520	36,080	26,560	278·99
Earthenware pieces	819,978	1,919,357	1,099,379	132·85
Broad Cloths, Stuffs, and Camlets ..	17,790	49,502	31,712	178·20
Calicoes, plain, printed, &c. yds.	680,234	34,843,110	34,162,876	5,022·22
Cotton Twist lbs.	8	4,558,185	4,558,177	56,977,212·50

The query put by the Board refers especially to the increased export of British staple manufactures; but it does not appear to me of any very material consequence whether the increase be in such staples directly or in foreign commodities, for which British manufactures must, in the ordinary course of trade, have been exchanged.

It had been confidently predicted before 1814, that there was little probability either of increasing the quantity or of multiplying the number of British commodities suited to the consumption of the people of India, and as little of augmenting the amount, or increasing the variety of the articles which India could furnish in exchange. The public records afford the best refutation of this mistake; and I shall barely enumerate a few of the articles which the free trade has either added to the commerce of India since the period in question, or for which it has created a new demand and a new market. These are,

APPENDIX,

No. 4.

continued.

Trade with India
Answers to Queries

Imports into Europe :

Siam Sugar.
China ditto.
Manilla ditto.
Rice in husk.
Madder.
Safflower.
Bees wax.
Barilla.
Castor oil.
Cubebs.
Sapan wood.
Ebony.
Lac-dye.
Manilla hemp.
Antimony ore.
Hides.
Buffalo horns.
Orpiment.
Pearl sago.

Exports from Europe :

Cotton piece-goods.
Cotton yarn.
Spelter.
Tin plates.
Cast iron utensils for native use.
Cutlery for ditto.
Fire-arms and cannon for ditto.
Gunpowder for ditto.
Glassware for ditto.
Porcelain for ditto.
Copperas.
Verdigris.
Salt.
Chalk.
Flints.

In the London price-currents of 1814, none of the import articles here given, with the exception of lac-dye, which had been recently discovered, are quoted; and in the Calcutta price-currents of a corresponding period, the only European articles of sufficient importance to be deemed worth inserting, are copper, iron, lead, canvas, tar, cordage, and some paints. At present, European importations are regularly classified, and in reality constitute nearly one-half of the entire imports, being estimated at about two millions sterling per annum.

German spelter or zinc, paid for generally in British cottons, is a case in point; and as the export of this article affords a remarkable illustration of the beneficial effects of the free intercourse with India, I shall offer a few observations upon it. It was first exported to India in 1820, to the amount of 420 cwt. The quantity exported in 1828 was 84,980 cwts., and in the nine years ending with the latter, the total quantity exported was nearly 40,000 tons. Before 1820, all India was supplied with this extensively consumed metal by smuggled exports from China, it being unknown down to that time, except to scientific persons, that the Chinese article differed only in name from the European. The Chinese article has now not only disappeared from the Indian market, but German spelter is largely imported into China itself, forms a regular article of quotation in the Calcutta price-currents, and is even re-exported. In 1815, the quantity of Chinese zinc imported into Calcutta was about 20,000 cwt., and the price to the consumer was 90s. per cwt. In 1827-28, the importations of German zinc amounted to 107,246 cwt., and the price was about 20s. per cwt. In other words, the supply had increased in more than a fivefold proportion, and the price had fallen to less than one-fourth of its previous amount. These facts speak sufficiently for themselves, and demand no comment. One other example may be given. It will be seen from the Table that the increase in the exportation of copper from Great Britain is but inconsiderable. This is very easily accounted for. The Indian market has been supplied in a good measure with unwrought copper from the southern provinces of Russia through Persia, from Japan, and above all, from South America. This last article had been paid for in British manufactures, for which, through India or China, it has formed a convenient remittance. In 1814-15, the copper imported into Calcutta amounted to 53,000 cwts., and in 1821-22, the latest year to which I can refer for quantity, to 83,000 cwts. In 1813-14, the value of copper imported into the same place was about £230,000, and in 1827-28, the price having fallen 20 per cent., about £400,000. Zinc and copper, the two metals to which I have now alluded, form the materials of almost all the culinary and domestic

tic utensils of the natives of India; and it is not necessary to insist upon the great advantages which they at least have derived from a free commerce, which furnishes them with the increased supply at reduced prices, implied in the statements which I have now submitted.

In 1813-14, the value of the opium exported from Calcutta amounted to about £730,000. In 1827-28 it amounted to above £1,200,000. Previous to the opening of the free trade, the quantity of Indian opium annually consumed in China did not exceed 2,500 chests, nor the value more than half a million. In the three years stated below, the quantities and values were as follow :*

YEARS.	CHESTS	—
		£
In 1821-22	4,628	1,662,920
1827-28	9,475	2,076,428
1830-31	18,760	2,580,006

It will appear from this statement, that through the operation of the free trade, for it is impossible to trace it to any other source, this branch of commerce has in quantity been multiplied in more than a sevenfold proportion, and in value in above a fivefold proportion. It would be useless to go farther; and I shall only observe generally, that wherever a field has been opened for free trade, it has invariably been occupied.

The quantity of lac-dye and of shell-lac imported into Great Britain in 1814 and 1828 was as follows :

	1814.	1828.
Lac-dye	lbs. 278,899	lbs. 728,240
Shell-lac	110,670	461,477

Lac-dye is now extensively used for dyeing scarlets, as a cheap substitute for cochineal;† yet in 1815, but a few years after its discovery, the following is the commercial report made upon it in London and Calcutta, as I find it in the observations of a price-current of the latter place for October 1815: “The last reports on these articles from the London market are unfavourable indeed, as will be seen by the following extracts from a letter of the first authority: ‘London, May 10.—Of lacs we could heartily pray not a chest were to be destined this way for years, for not a chest can we induce any one to look at, even at the most reduced prices.’” In the year in question, it appears that the importations had been doubled; next year they fell off to one-half of this quantity; and the supply suiting itself to the demand, the consumption has gradually and largely increased, the quality of the drug having at the same time been greatly improved. The augmentation in the consumption of shell-lac, which I understand to be used in the manufacture of hats and other manufactures, has been still greater, for I find that in 1829 it amounted to 725,780 pounds weight, being more than sixfold greater than it was in 1814.

That the people of India have benefited largely by the free trade, confining its operation to mere price, is, I think, obvious. Whatever foreign commodities they consume, they receive at a reduced price, and for the produce of their soil, or for such productions of their skill as are suitable to their industry, they have not only a wider market, but for the most part equally good prices as under the monopoly. This may be satisfactorily shown

* Canton Register and Price-current.

† In 1814, the average price of cochineal in the London market was about 45s. per lb.; at present it is about one-sixth part of this price. The price of lac-dye was 6s. 6d. and is now fallen to less than one-fifth of this.

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shown by comparing the prices at the period of the opening of the trade with the present ones. The following are examples:

IMPORTS.

	1815.	1831.	Increase per cent.	Decrease per cent.
	Rs. As.	Rs. As.		
Alum per maund	5 14	3 0	—	48
Camphor —	85 0	44 8	—	47
Cassia —	50 0	14 0	—	72
Vermillion —	123 0	105 0	—	15
Tin —	30 8	22 0	—	27
Coffee, Mocha —	31 10	17 12	—	44
Rosin —	3 2	1 13	—	42
Nutmegs —	6 0	2 10	—	56
Pepper, black —	14 0	9 9	—	31
Bees' wax, Pegu —	71 0	30 0	—	57
Sago —	6 4	2 0	—	68
Brimstone —	10 14	3 0	—	72
Copper, sheathing —	46 0	37 6	—	18
— Ingot —	40 0	34 2	—	14
— Nails —	51 0	30 0	—	41
— Ingot, Japan —	42 2	37 4	—	11
Iron, Swedish flat —	5 7	5 5	—	2
— English ditto —	4 10	2 15	—	36
— Nails of sizes —	22 0	8 6	—	61
— Hasps —	5 4	3 3	—	39
Lead, pig —	12 2	5 1	—	58
— sheet —	13 12	5 15	—	56
Red lead —	14 11	6 14	—	53

EXPORTS.

	1815.	1831.	Increase per cent.	Decrease per cent.
	Rs. As.	Rs. As.		
Cotton Wool per maund	11 12	9 10	—	18
Ginger —	5 8	6 2	11	—
Rice —	1 9	1 15	24	—
Wheat —	1 0	1 7	43	—
Safflower —	24 4	48 8	100	—
Sacking, Canvas —	5 12	8 8	47	—
Lac-dye, native —	79 2	26 0	—	67
Shell-lac —	23 3	29 8	27	—
Saltpetre —	4 8	7 6	63	—
Sugar —	9 15	8 6	—	15
Tamarinds —	1 10	1 14	15	—
Turmeric, Patna —	2 11	2 7	—	9
Timber, native, of sorts per piece	19 6	19 11	1	—
Allahabad Mahmoodies —	96 0	47 8	—	50
Luckipore Baftoes —	58 0	85 0	46	—
Bandanoes, silk —	140 0	117 8	—	16

These statements are taken from Calcutta price-currents for the months of September 1815 and August 1831. An earlier period than the first would have afforded a more favourable result as far as relates to exports, but the materials were not within my reach. It will be seen that, with respect to the imports, a great reduction has taken place in every article, while some commodities now reach the consumer at one-half what they cost in 1815. With respect to the exports, there has been an increase of price in eight out of the sixteen articles named. In others, the fall of price is not considerable. It has been large, as might be expected from the competition of British manufactures in the finer cotton fabrics, but in the coarser, where this competition does not exist, there has been a rise. The fall in the price of some articles, as lac-dye, may, I believe, be fairly ascribed to greater skill and economy in the process of manufacture. The fall in the cost of silk manufactures, according to the statement, is sixteen per cent., but as averages only are given, even this is probably overstating it, for the highest prices of 1831 considerably exceed those of 1815; the greater range of quotations in the first year accounting for the discrepancy.*

As the producer, trader, and carrier of Great Britain are satisfied with the results of the opening of the trade in 1814, and anxious only for further extension, or as they are at least convinced that the profits are not smaller than other branches of the foreign trade of the kingdom, and it is quite impossible they should be larger, I shall proceed to show what the effects of the free trade have been on the interests of the British consumer, by comparing the prices paid for Indian commodities in three periods, namely, when the monopoly was entire, when it was partially broken in upon by the Act of 1793, and at the present time. This is done for a few principal articles in the following table, of which the first two years are taken from Prince's London Price-Current, quoted by Mr. Tooke, and the last from schedule annexed to the petition of the London Merchants, given in evidence to the select committee of the Commons in 1831.

	1793.		1815.		Increase per cent.	Decrease per cent.	1831.	Increase per cent.	Decrease per cent.	
	s.	d.	s.	d.			s.	d.		
Cotton wool .. per lb	1	0½	0	11½	—	9	0	5	—	56
Indigo	7	4½	8	10	9	—	4	0	—	54
Rice per cwt	None		23	9	—	—	14	10	—	39
Saltpetre	59	9	87	0	45	—	36	0	—	58
Raw Silk per lb.	21	0	18	1	—	13	13	7½	—	24
Cinnamon, Ceylon ..	12	0	13	8	13	—	8	9	—	35
Pepper, black	1	2½	0	10½	—	27	0	3½	—	64
Sugar per cwt	66	6	49	1	—	26	26	2	—	46

It will be seen from this statement, that the price of every article, except those absolutely or virtually under a monopoly, viz. cinnamon and raw silk, has fallen to about one-half what it was in 1815. The fall of price seems to be in proportion as the trade in each commodity is free. Pepper, which is the produce of a great many countries, and in which the trade is quite unshackled and the competition active, is the most remarkable example. It has fallen to one-third of the price it bore in 1815, and to nearly one-fourth of that which it bore in 1793, when it was a monopoly of the East-India Company. The fall in the price of sugar has also been great, but not so considerable; but this is in some measure accounted for by the superior quality of the article now imported. In raw silk, the fall in price between 1815 and 1831 has barely amounted to one-fourth part; not much more than will account for the different value of the currency in the two years. The fall in the price of cinnamon has not much exceeded one-third part; and the decline has been produced

* Highest price of 1815, rupees 145
Ditto — of 1831 — 150.

APPENDIX,
No. 4.

continued.
Trade with India
Answers to Queries.

duced in a good measure by the competition of cassia, which is rapidly taking its place, and in which the fall of price has been very great.* One advantage to the consumer, and also to the merchant, derived from the open trade, is the steadiness of price which has resulted from it. For some years back there has been very little fluctuation in the price of any Indian commodity, of which the production and commerce has been free. On the contrary, during the close monopoly, the fluctuation of prices was extremely violent even within the same year. In 1792, for example, a year of profound peace, I find the quotations of cotton wool of the same quality, as low as 11*d.* per pound, and as high as 1*s.* 3*d.* In the same year, the same quality of black pepper is quoted as low as 1*s.* 4*d.*, and as high as 1*s.* 11½*d.* per lb.; and the same saltpetre is quoted at 40*s.* and at 63*s.* per cwt. within a few months of each other.

Glasgow Chamber
of Commerce

For an answer to this Question, we would refer to the official returns of imports and exports, which alone can give an authentic and full view of the matters embraced in it. From these it will be seen that the increase has been very great.

With regard to the exports, it has consisted chiefly of British staples, and as regards this port in particular, of cotton piece-goods and twist.

Manchester Cham-
ber of Commerce
and East-India
Committee

This Query will be best answered by official returns. The increase in the staples of Lancashire is believed to be without a parallel. The export of British cotton manufactures and twist to India and China, in the years ending 5th January 1815 to 1831, is exhibited by the annexed table, framed from papers presented to the House of Commons.

			White or Plain Manufactures.	Printed or Dyed Manufactures.	TOTAL.	Cotton Twist.
			Yards.	Yards.	Yards.	lbs.
1815	..	..	213,408	604,800	818,208	8
1816	..	..	489,399	866,077	1,355,476	—
1817	..	..	714,611	991,147	1,705,758	624
1818	..	..	2,468,024	2,848,705	5,316,729	2,701
1819	..	..	4,614,381	4,227,665	8,842,046	1,862
1820	..	..	3,414,060	3,713,601	7,127,661	971
1821	..	..	6,724,031	7,601,245	14,325,276	224
1822	..	..	9,919,136	9,976,878	19,896,014	5,865
1823	..	..	11,712,639	9,029,204	20,741,843	22,200
1824	..	..	13,750,921	9,540,813	23,291,734	191,500
1825	..	..	14,858,515	9,666,058	24,524,573	103,350
1826	..	..	14,214,896	8,844,387	23,059,283	235,360
1827	..	..	16,006,601	10,218,502	26,225,103	919,387
1828	..	..	24,786,540	12,962,765	37,749,305	3,063,856
1829	..	..	27,068,170	10,498,666	37,566,836	4,549,219
1830	..	..	—	—	39,733,698	3,185,639
1831	..	..	—	—	52,179,844	1,494,995

* In 1814, the price of cassia was from £20 to £25 per cwt.; it is at present from £4 10*s.* to £5. The consumer may now have for the same expenditure 10 lbs. of cassia for one of cinnamon, the difference of duty excepted, which is a bonus paid to the cinnamon monopoly. In 1814 he could barely have got 3½ lbs. of cassia for one of cinnamon. The importations of these two articles in 1814 and 1828 were as follow —

			1814.	1828.	Increase per cent.
Cassia lignea and cassia buds	..	lbs.	173,988	671,560	228
Cinnamon	..	..	276,982	337,482	21

The following table, showing the total value of merchandise imported at Calcutta from Great Britain, by the private trade, for fifteen years, say from 1813-14 to 1827-28, has been communicated by a merchant of Calcutta, now in this country, by whom it was extracted from a work on the Commerce of Bengal, by H. H. Wilson, Esq., Assay Master to the Government Mint in Calcutta. The continuation of the table for the two years 1829-30 and 1830-31, is taken from Bell's Comparative View of the Commerce of Bengal. The particulars of the year 1828-29 are wanting.

Commercial Year.	Total Value.	Copper.	Iron.	Woollens.	Cotton Goods.	Twist
	£.	£.	£.	£	£.	£.
1813-14	5,376,775	78,581	230,547	184,521	91,835	Nil.
1814-15	4,099,165	396,323	278,746	44,712	43,346	—
1815-16	5,752,886	411,884	455,078	122,619	261,846	—
1816-17	8,051,112	542,267	583,610	238,616	313,102	—
1817-18	13,562,962	891,601	821,433	574,184	1,120,909	—
1818-19	15,944,495	1,730,329	617,089	735,611	2,655,192	—
1819-20	8,633,573	1,835,112	333,935	911,618	1,585,890	—
1820-21	11,320,797	2,441,403	632,390	1,719,268	2,555,908	—
1821-22	15,163,826	2,464,659	610,419	2,511,495	4,681,870	—
1822-23	18,098,611	1,903,566	619,869	2,010,422	6,577,279	—
1823-24	15,862,534	2,382,938	661,136	1,648,986	3,716,278	—
1824-25	17,607,786	2,235,434	567,262	1,587,314	4,627,765	81,145
1825-26	12,868,606	489,115	743,998	884,683	3,665,461	141,305
1826-27	12,858,348	831,672	502,005	1,083,978	3,804,022	809,052
1827-28	18,991,756	1,903,401	592,084	2,415,759	4,930,139	1,842,110
1828-29	—	—	—	—	—	—
1829-30	16,125,841	2,662,383	494,021	866,486	5,061,861	1,437,126
1830-31	20,073,354	4,061,634	620,994	1,425,918	5,818,247	2,917,969

There has been an increase in the annual imports from India since 1814. Indigo, for instance, the most valuable export from India, has increased since the above period fully one quarter in quantity, though this will not appear by the returns of the trade to this country, as during the war very little was exported from India direct to the Continent, and consequently no comparison can be made with the direct trade to the Continent of Europe now existing. Prior to 1814, cotton piece-goods were shipped extensively to England from Bengal, and a considerable supply of raw cotton was also sent frequently from both Bengal and Bombay; the great increase which took place in the manufacture of cotton piece-goods in England, soon after the general peace, occasioned an unusually large supply of raw cotton to be brought from Bengal and Bombay for two or three years. At present, the import from the former place is small, owing to the superior quality and the low cost of the cotton grown in the United States of America, and with which Bengal cotton is not likely to compete successfully during a free intercourse with America. The import from Bombay (where the quality of the cotton is superior to that of Bengal) continues, but on a limited scale with reference to the shipments of 1815, 1816, and 1817. The imports of raw silk have increased during the present Charter, but this article is chiefly in the hands of the East-India Company. The imports of saltpetre have also increased; and Bengal will probably continue to be the chief source of supply, the cost of production being low, and thereby enabled to compete with Peru, from which country some shipments have recently arrived. The imports of lac-dye, shellac, and various articles usually denominated drugs, have gone on increasing; and as a general remark on this subject, I may observe, that at present, and for some time past, the trade has been decidedly profitless.

Mr Mackillop.

APPENDIX,
No. 4.
continued

Trade with India
ANSWERS TO QUERIES.

large quantities: but I may here observe, that the export of all these articles is more owing to the reduction that has taken place in their cost in this country (either of which can now be purchased at one-half or one-third under their value in 1814), than to the facilities which have been given to the trade with India: it is not necessary I should more particularly notice the articles of which an increased export has taken place, as the reports from the custom-houses of this country and of India, afford ample details.

Liverpool East-
India Committee

The increase of trade with India since 1814 has been enormous, as appears by the Parliamentary Returns, and the exports consist almost entirely of British manufactures; it may also be safely asserted that such foreign produce as has been exported to India, has been purchased virtually by a similar amount of British produce.

From 1794 to 1814, the export trade in the hands of the Company had greatly fallen off, the official value of the exports to India (including those to China, which varied little) having been on the average of the first six years of that period, £2,924,802, and of the last six years, £1,699,123; but upon the opening of the trade in 1814 (though the Company's exports have further fallen off) the increase on the whole has been most rapid, as appears by the following comparative view:

Declared Value of Exports to India (excepting China):

	Company's.	Private Trade.	Total.
Average of three years, 1814—1816	818,784	1,524,518	2,343,302
Average of three years, 1827—1829	576,266	3,825,110	4,401,376

The Exports of 1829 exceeded those of 1814, as follows:

	Company's.	Private Trade.	Total.
1814	826,558	1,048,132	1,874,690
1829	434,586	3,665,678	4,100,264

and it is believed that a return of exports for 1830 and 1831 would show a still greater increase, but these returns have not reached us.

These statements give, however, but an imperfect view of the subject, as from the great decline in the price of commodities, which has been taking place for many years past, the actual increase in the quantities imported and exported greatly exceeds the apparent increase which the declared values indicate.

The Parliamentary Returns show the great increase of the trade with India since 1814, when it was partially opened, and consists almost entirely of British staples. In that year, the declared value of the Company's Exports amounted to

£ 826,558, and of Private Merchants £ 1,048,132 = £ 1,874,690;
and in 1829, to £ 434,586, and of Private Merchants £ 3,665,687 = £ 4,100,273;

but when the depreciation in the price of commodities that has taken place since 1814 is considered (being nearly fifty per cent.), the *quantity* greatly exceeds what the declared value indicates of those years. Under the estimate of this decline in prices, it appears that the quantity exported by the Company in 1814 varied little when compared with that of 1829, while the quantity exported by the Private Merchants has increased sevenfold.

In the "Papers relative to the Finances of India and the trade between India and China, February 1830, a return is given of the export and import trade with India for sixteen years subsequent to the year 1814, in which the Company's trade is distinguished from that of individuals." It is accordingly certified in this official document, that the trade with India has increased much more than the most sanguine could have anticipated within so short a period, and that this increase is wholly to be ascribed to the enterprize and intelligence of individuals, the Company's trade appearing stationary, as to amount, throughout the period, whilst that of individuals gives an average of nearly three times the amount of the Company's trade.

Mr Rickards

The principal articles imported into India from Britain, are cotton piece-goods, twist, woollens, and metals, including spelter. To these may be added almost every other description of British manufacture, such as hardware, glassware, porcelain, jewellery, &c. Of the increase of British manufactured articles which has taken place in the period alluded to, some idea may be formed from the following facts given in evidence. The first import of cotton twist into India occurred in 1821. In 1824, about 120,000 lbs. were imported; in 1828, about 4,000,000 lbs. In 1815 the importation of British white and printed cotton goods into India, was about 800,000 yards; in 1830, it was about 45,000,000 yards. It will also be seen on reference to the evidence and official documents therein quoted, that the increase of British exports to India includes a great variety of articles formerly unknown, or not used in India, and that this extension of commercial intercourse is wholly to be ascribed to the enterprize and operations of private merchants.

QUERY III.—WHAT is the System pursued by the Company in the conduct of their Commercial Transactions in India, whether in the Interior, or at the respective Presidencies?

Answer.—In Bengal, I have understood, the Board of Trade issue instructions to the commercial agents, to make advances for such quantities of silk, sugar, and cotton, as they

Mr Bracken

* Vide No. 40 of Papers referred to, and Evidence, July 1831, Answer 2754, et seq.

	Rupces
The document here referred to states the average of the Company's trade, export and import, for sixteen years, to be	1,68,47,815
Whilst that of the present Government for the same period is	5,45,14,540

But the average of the Company's exports to India in goods and treasure is only ..	5,71,344
Whilst that of the Private Trade from Britain, Foreign Europe, and America, is ..	2,84,54,537

Or upwards of five times the amount of the Company's exports.

† Vide Evidence, March 1831, Ans. 1021.

‡ Vide Evidence, July 1831, Ans. 2573

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they may deem requisite, under the orders of Government, for the Home and China annual investments. They report to the Board the rates at which the same are or may be procurable. Provision is made for the advances, by orders on the neighbouring collectors. To places in the vicinity of Calcutta, cash is sent from the general treasury. When Government determine to purchase indigo for shipment to London, an advertisement appears in the Gazette inviting tenders, stating the quantity, the quality, the district of manufacture, the planter's name, the distinguishing marks, and the price, to be sent in to the Sub-Export warehouse-keeper, who is authorized to accept or reject them.

Mr. Crawford

There are several gentlemen now in England whose experience will enable them to afford far more valuable information in reply to this question, than it is in my power to supply. At some of the out-settlements in the Eastern Islands where I served, the Government, as usual, was in the habit of keeping what may be called an open shop for the vend of European manufactures, where a yard of broad cloth might have been purchased. When I took charge of the settlement of Singapore in 1823, I found a warehouse of this description in existence; and a large quantity of pepper bought as an investment for China, was made over to me by my predecessor.

Mr. Mackillop

The chief articles which the East-India Company export from Bengal (with the trade of which I am better acquainted than that of the other Presidencies, having resided in Calcutta nearly eighteen years) are silk, indigo, cotton, sugar, and saltpetre. The investment of silk is provided by the Company making advances in the districts, where it is produced to the natives, who cultivate the mulberry plant, and superintend the reeling of the cocoons at the Company's filatures. The Company do not cultivate or manufacture sugar, cotton, saltpetre, or indigo; they purchase the three first of these articles at the marts in the interior, from the native dealers, who collect them in the districts where they are produced or manufactured; the latter they purchase in Calcutta, from the agents of the parties who manufacture it chiefly in the districts of Bengal Proper; the only other articles which the Company now manufacture or purchase to any great extent in Bengal and dependent provinces, are salt and opium; the former they manufacture, and having a monopoly of the supply of the wants of their own provinces, a large revenue is derived from the sale. For opium, advances are made nearly in the same manner as for silk, but when brought to market, instead of being exported on the Company's account as silk is, the opium is brought to public sale, and generally sells at a great profit; but as, according to the system of the Company, salt and opium must be considered as being sources of revenue rather than articles of commerce, it is not necessary I should further advert to them. The Company's imports into Calcutta of European goods used to be disposed of at public sales, recurring periodically to suit the convenience of the public. I am not aware these sales affected the markets more than the same quantity of goods would have done if brought to sale by individuals; but this branch of trade has, I believe, been latterly abandoned by the Company.

Mr. Ivan.

In realizing the Honourable Company's investment of cloth, I entered into an agreement with the brokers, or it may be called a contract; these brokers are the head weavers of their respective villages, chosen by the weavers themselves to represent them to the resident, and to adjust their accounts; these weavers again enter into a contract with the broker for the delivery of a certain quantity of cloth monthly, to whom they give a trifling per-centage, which is included in the price of the cloth. The same procedure has been followed with regard to hemp.

The

The best answer to this Question will, we presume, be found in the evidence taken by the Committees of the Two Houses of Parliament. The members of this association cannot be competent to answer it so satisfactorily.

The members of this Board, not having any of them been in India, cannot answer this Question so satisfactorily as they could wish; but no doubt the fullest information might be obtained through other channels.

Manchester Chamber
of Commerce
and East-India
Committee.

QUERY IV.—WHAT are the practical Effects of the Union of Government with Trade in India? In point of fact, have the powers of Government been employed to place rival Merchants under any unfair disadvantages in Trade? Has rivalry in Trade been found to be productive of any undue bias to the proceedings of the Government as a Government, when rival Merchants are concerned? If any inconveniences to the Public do in fact arise from the union of the two operations, do they or do they not outweigh the advantages of the Company.

Answer.—THE system pursued by the East-India Company in the conduct of their commercial transactions in India may generally be said to be oppressive to the native merchants, opposed to the interest of the British merchants, and unprofitable to themselves. This statement is founded chiefly upon the Evidence laid before Parliament, and assisted by information derived from private sources. That it is oppressive to the native dealers we think is fully shown by the testimony of Mr. Joshua Saunders (*vide* Minutes of Evidence, 17th March 1831), when speaking of the Company's mode of purchasing silk; and by the evidence of Sir Charles Forbes (*vide* Minutes, 14th April 1831), when speaking of their purchases of cotton and their monopoly of salt. That it is opposed to the interest of private merchants is shown in almost every page of the evidence hitherto taken before Parliament; and that it is now, and has been, unprofitable to themselves, is very evident from their total abandonment of many articles, and their diminished transactions in others.

Liverpool East-
India Committee

We believe that the practical effects of the union of government with trade in any country must be prejudicial to the general interests of commerce; and that this has been the case with the East-India Company there is abundant evidence to prove. It has been shown that the powers of government in India have been employed to place rival merchants under unfair disadvantages in many instances, and to exclude them entirely in others. It appears by evidence given before Parliament, that the Indian Governments have, on different occasions, declared particular branches of trade to be open to private individuals, and after allowing them to embark their capital in such trade, have afterwards declared it to be shut. Of this a remarkable instance is given in the evidence respecting Mr. Wilkinson's case in 1811, and later in the act of the Bombay Government in 1828, when the trade in Malwa opium was declared to be free; and afterwards, in the course of a few months, when it suited the views of the Company, the monopoly was resumed.

It has been shown that the native dealers in India are both afraid and unwilling to dispose of those articles of produce to private merchants, which the Company are in the habit of purchasing, until they have first ascertained their wants, and the wishes of their

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commercial agents ; and it must be obvious, that where the public revenues of the State is brought into collision with the capital of private merchants in the same market, the result must be disadvantageous to the latter.

British merchants trading with India have still to complain of many regulations in that country injuriously affecting their commercial transactions ; and of these we would particularly point out the restraints imposed upon the resort of merchants to India, the necessity of procuring an expensive license at the India House before they can proceed to reside in India, and the necessity of applying for a further license from the local Governments before they can remove from one district to another, after their arrival in that country ; the necessity too of applying for and obtaining a certificate of good conduct from the local Governments on leaving India (which document must be produced at the India House along with every application for permission to return a second time to that country), is calculated to lower the character of the British merchant, and is galling to the feelings of the individual. The power at present possessed by the local authorities in India, of withdrawing the licenses of individuals without assigning a reason, and of sending them out of India at a moment's warning (however seldom it may be acted upon), is calculated to place the property entrusted to such persons in unnecessary jeopardy, and thereby narrows the freedom of intercourse between the two countries. As a measure more immediately and injuriously affecting the export trade of this port to Calcutta, we must notice the imposition, in 1817, of a heavy and prohibitory duty upon all salt imported into India from this country.

Mr. Sullivan

The observations I am about to make I beg may be understood as only applicable to the southern provinces of Madras, Tinnevely and Ramnad, having resided in those districts upwards of twenty-eight years, in realizing the Honourable Company's investment in cloth, and afterwards in cotton ; rising progressively from the appointment of an assistant to that of commercial resident, the last seventeen years of that time being resident.

The length of residence in those districts must of course have given me many opportunities of hearing complaints made by private merchants that they had not been able to purchase for ready money cloth which the weavers had by them, as well as gunnies, which is the outer covering of the bales of cloth or of cotton, made from hemp. In the districts I have mentioned only one merchant resides, but there have been occasionally agents from Madras, who have come up to make purchases ; and of late years a Mr. Gordon has been speculating in Ramnad.

I never heard of the local authorities obstructing a merchant in the prosecution of his mercantile engagements, and it stands to reason that they would give every encouragement to their exertions, for the more the trade is extended, the greater will be the revenue.

The little I have said on the Honourable Company's investment will, I think, be sufficient to show that while they were under my management there was no monopoly, and that my engagements were as free as any private merchant ; but, nevertheless, the Honourable Company paid more for their goods than the private merchant, which may be accounted for as following : no public agent can ever procure any large quantity of goods at the same price the private merchant does ; the private merchant's purchases are limited, and when he does not wish to exceed a stipulated sum, and cannot procure the article he wants on his own terms, will decline purchasing. With the public agent it is different ; the native agent knows as well as the resident that he has received certain orders to purchase a certain quantity to be ready by a certain time ; they keep

up their price, and make the resident on most occasions come into their terms. The charges on the Honourable Company's goods are great, from the nature of the carriage, and I do not think they can derive any advantage from their trade except by way of remittance.

This Board is not aware that the powers of government have ever designedly been employed to place rival merchants under any unfair disadvantages in trade; but there can need no proof at this day, that when governments act as traders, their operations will of necessity be productive of such an effect; nor can it be necessary to urge arguments in support of what has long been admitted to be a commercial axiom, the incompatibility of the twofold character of sovereign and trader. Whether these disadvantages "do or do not outweigh the advantages to the Company" is an inquiry which it might seem presumptuous to attempt to answer absolutely, without a fuller knowledge of the bearing of all the trading operations of the Company than this Board possesses; but so far the Board may venture to say, that it is not aware of any commercial operations conducted by the Company which might not be at least as effectively, economically, and advantageously performed by private merchants, allowing only reasonable time for carrying the change of system into effect.

Manchester Chamber of Commerce and East-India Committee

We have no practical experience on the subject of this question; but it would appear from the evidence already referred to, that the growth and trade in silk has suffered great disadvantages from the rivalry of the East-India Company's commercial servants, and on general principles it must always be injurious to private merchants when the sovereign of the country is a rival trader.

Glasgow Chamber of Commerce

I shall perhaps best answer this question by stating that I am not prepared to say objection exists to the mode in which the Company conduct their commercial transactions in India, nor that these transactions have been practically detrimental to the equitable government of their dominions. I have already adverted to the manner in which their investments are provided. Their purchases, when made in the interior, are effected through the agency of their commercial residents (civil servants, and generally of long standing), who have not, that I am aware of, unfair advantages over other persons purchasing in the same markets; while the Company's purchases being made periodically, and nearly to the same extent annually, the knowledge that goods will be required must be an incitement to the natives to grow or manufacture the goods required for the public investment.

Mr Mackillop

In the attempts made by private persons to manufacture silk, disputes have frequently arisen between those engaged in them and the residents or agents of the Company, in consequence of a collision of interests, but this is only what often happens between neighbouring indigo planters, and arises out of the plan on which both the indigo and silk business is conducted; for instance, a ryot (or small landholder) will take an advance for the cultivation of a certain piece of ground, either for mulberry or indigo plant, as the case may be, and it is not unusual for him also to take from another party a similar advance for the same piece of ground for the like purpose, and thus the produce of the ground for which advances have so been made, becomes matter of dispute between the parties. The regularity of the Company's investment and command of money have given them advantages over individuals.

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Mr Bracken

If we refer to the transactions of private merchants not exposed to a government rivalry, we arrive at the following results. The total export of British merchandize to Bengal were,

In 1813-14	...	...	...	...	...	£1,574,707
Of which Private Trade	...	...	...	...	£1,253,472	
Of East-India Company's	...	...	...	...	321,235	
						<u>1,574,707</u>
In 1828-29	...	...	...	...	...	£3,034,464
Of which Private Trade	...	...	...	...	£3,019,273	
* Of East-India Company's	...	...	...	...	15,191	
						<u>3,034,464</u>

exhibiting an increase of the private export trade of about 150 per cent., and a decrease of the Company's of about 2,000 per cent. within these periods.

Could the East-India Company have exercised sovereign power at Manchester or Glasgow, and applied that power to the production of cotton twist or piece-goods, who so bold as to assert that the consequences would have been the same? But even in India itself, wherever the Company's direct interference has been relaxed, the course of trade has been followed by results similar in principle.

In 1813-14, East-India Company's imports	...	...	...	...	S. Rs. 99,40,193
Deduct raw silk	...	...	...	...	42,20,000 *
					<u>57,29,193</u>
Private Trade	...	...	...	...	3,55,40,438
In 1828-29, East-India Company's	...	...	...	...	S. Rs. 1,63,71,594
Deduct raw silk	...	...	...	...	78,39,654
					<u>85,31,940</u>
Private Trade	...	...	...	...	5,02,81,959

exhibiting an increase of the former at the rate of about 30, and of the latter, of about 75 per cent.

The clauses of Regulation XXXI. of 1793, repealed by Regulation IX. of 1829, combined with other disadvantages arising from the general character of the Company's commercial agencies, and to which I shall more particularly allude hereafter, had almost driven private competition from the raw silk market, on which branch of trade, practically, the Regulation in question bore with the greatest detriment.

In 1827-28, the value of raw silk exported from Calcutta was

† East-India Company's	...	S. Rs. 78,63,080 or	£786,308
Private Trade	...	3,15,592 -	31,559

The whole export trade in produce for that year being

East-India Company's	...	S. Rs. 2,05,32,676 or	£2,053,267
Private Trade	...	3,89,94,428 -	3,899,442

The Regulation IX. of 1829, was followed by a considerable increase in the private trade in raw silk; for the relative export in 1828-29 was,

† East-India Company's	...	S. Rs. 78,39,654 or	£783,965
Private Trade	...	14,03,170 -	140,917

exhibiting

* I deduct raw silk, as it has been virtually a monopoly.

† Vide Appendix III. Affairs of Hon. East-India Company, printed 1831

‡ Ditto.

exhibiting a slight decrease in the former, and an increase in the latter, as compared with the preceding year, of upwards of 400 per cent. Possibly other circumstances may have contributed to this result, but the coincidence is remarkable.

The effects are to destroy private competition, and consequently to create a monopoly, enhancing cost and limiting consumption. In the instance of raw silk, produced almost entirely by the Company, the quantity exported by them to Great Britain has increased from 844,961 lbs. in 1814, to 1,030, 629 lbs. only in 1828; whilst the cost at the agencies, exclusive of all charges, has increased from about 9 to 15 sicca rupees per seer, or from 9s. to 15s. per lb. without any corresponding improvement in the sale price.

To show the prejudicial influence of the East-India Company on the transactions of private merchants, it is only necessary to refer to the continued operation for so many years of the Regulation XXXI. of 1793, which it is impossible to suppose would ever have been enacted, unless the interests of traders had been combined with the power of sovereigns. And although I am prepared to admit that some Governors-general and some members in Council have been honestly desirous to place all traders on an equal footing, I am equally prepared to assert, that such desire has been inevitably rendered nugatory by the nature and character of the commercial agencies, by the machinery employed for their own commercial purposes.

The natives regard the commercial resident as a man of authority, not as a mere merchant. He resides in a palace, and is surrounded by all "the pomp and circumstance" of high station, and to those who have been in India, the moral effect of this position is sufficiently obvious. Correct too and honourable as he himself may be, the details of his duties mainly devolve on sircars and other subordinate employes spread over the district with much real and more assumed power, and more or less corrupt, from the inadequacy of their salaries, contrasted with their means of extortion.

No man feels himself quite secure in entering into engagements with a private trader, until he has a tolerably certain assurance that he is not likely to be required to take advances from the residency. An attempt to make himself independent might expose him to much vexation and injury. Indeed, the records of the Bengal Government will show many instances of silk filatures destroyed by the peons of the commercial residents, and of indigo plant ploughed up on allegation that the ryots had engaged to cultivate the mulberry. In Commercolly, I have understood the latter circumstance has been of frequent occurrence.

Some light is thrown upon the compulsory tendency of the Company's commercial system by the 8th paragraph of the Board's letter, dated 27th April 1827 which is as follows:

"It will therefore be your duty to explain these matters fully to the peons and rearers of cocoons employed under your factory, so as to prepare their minds to submit, without murmuring, to the prices you may deem it necessary, under these orders, to determine on granting them for the silk and cocoons produced during the several bunds of the year; impressing it at the same time upon them, as a matter of absolute necessity, that they will seek in vain to elude the operation of the system now about to be established, by carrying their cocoons away from their own factory, in order to deliver them into a neighbouring factory for the sake of obtaining increased prices, because they will by so doing inevitably meet with disappointment; it being our firm determination not to allow any resident to give a higher price for silks or cocoons than his neighbouring resident within the same circle of locality; and should any resident, contrary to his duty and all just expectation, be found to countenance and encourage such a proceeding, his conduct will be noted with merited animadversion."

Again, the Company's agents not fixing the price they propose to give to the rearers of cocoons until the silk is reeled off, the private dealer has frequently, if not always, been compelled to make his purchases dependent upon their rates also, thereby exposing himself to a price the prospects of the market may not warrant. It cannot create surprise that these

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these causes have almost ruined the private trade in silk; and although the repeal of Regulation XXXI. of 1793, is something gained, I anticipate little or no permanent improvement in quantity or quality, or reduction in cost, until the Company's interference in the production be withdrawn. How desirable such improvement in the raw material would be to the silk manufactures in this country, it is unnecessary for me to dwell upon.

In respect to whether "rivalry in trade has been found to be productive of any undue bias to the proceedings of Government as a government," I am much afraid I must state my belief in the affirmative. To begin at no earlier date, if we turn to the correspondence between the Court of Directors and Government preparatory to the renewal of the present Charter, and to the evidence then delivered before the Committees of both Houses of Parliament by the Company's servants, one cannot fail to be struck by the spirit of jealousy and hostility displayed towards persons desirous of resorting to and residing in India for commercial purposes. Commercial rivalry, indeed, could not with any decency be urged as the ground of excluding or of subjecting Europeans not in the service to restrictions, or to arbitrary acts of transmission, and therefore a more plausible objection to a free intercourse was taken, to which, unfortunately for India and for England, the legislature, in ignorance, and in a blind reliance on authorities, whose motives were obviously questionable, or whose information was defective, gave a very undeserved attention.

I have given my attention particularly to this part of their policy, because I was exposed to some inconvenience from it, and might have suffered much greater at the commencement of my own career in India. After passing three or four years and taking my degree at Oxford, I went to India in 1811, in the Company's cavalry, and shortly after my arrival resigned, for the purpose of joining the house to which I now belong. But I could not obtain permission to remain there, and was compelled to return to Europe. But on the present Charter being granted, I was allowed to go out again. To many persons this double voyage might have been ruinous; and I was naturally anxious to ascertain what sufficient grounds existed to expose the prospects of individuals to disappointment under such laws.

To a feeling of commercial jealousy also, I must attribute the alleged refusal of the Company to give their sanction to British merchants engaging in the trade between China and continental Europe, a trade in which they themselves were not interested, unless, indeed, they anticipated that the facility with which English merchantmen took in their cargoes for Bordeaux or Amsterdam, might create some wonderment that such ships could not land them in London or Liverpool.

In regard to "whether, if any inconvenience to the public do in fact arise from the union of the two operations, do they, or do they not outweigh the advantage to the Company?" I believe the existing system is, with reference to India, an unqualified, unmitigated evil; that no advantage whatever, in any shape or way, has been derived by the Company from the union, or could be derived by any government so constituted.

From the papers at present laid before Parliament, the extent of the Company's losses by their Indian trade cannot be accurately ascertained; there is no account that can strictly be called a commercial one. Indeed, it seems to be very doubtful whether any balance has ever been struck between their Commercial and Territorial branches; or whether the statements applicable to the former do or do not include some of the most important items affecting its results, *viz.* outlay for commercial buildings and houses of residents, interest on the same, repairs, outstanding balances, distinguishing recoverable and irrecoverable. In the Supreme Court in Calcutta, during the cause of the "Bank of Bengal v the East India Company," respecting certain forged promissory notes of the Government loans, it was stated by Mr. Oxborough, who had been seventeen years in the Accountant-general's office, "that in their books the two branches had never been balanced," and that "money for commercial purposes was furnished from loans bearing interest;" but I am not aware that the latter has been charged in the accounts before Parliament. It is possible more clear

clear and explanatory accounts can be furnished, but at present I am led to infer that nothing but territorial revenue has supported the Indian commerce, and if this be so at all, or to any extent, questions of the utmost importance will arise. It never can have been in the contemplation of the British Parliament that the people of India should be taxed to their utmost power of paying, to make good the commercial losses of a trading company. In justice to India, and in vindication of England, these points require the closest examination.

It does not appear to me, in the present state of our knowledge, to be at all necessary to adduce any new argument to prove that the union of trade and sovereignty is an insuperable vice in any administration, and that the business of the merchant and the duty of the sovereign are utterly incompatible with each other. Under all the native governments of Asia, with which I have any acquaintance, China excepted, the trading propensities of their respective sovereigns oppose the chief obstacle to a commercial intercourse with them, nor can I conceive how the British Government of India can be made an exception to a principle of universal application. If the Company pay for the commodity it deals in what the commodity is worth, and as much as any other trader would give for it, it certainly cannot sell it in any open market for more than it is worth, or for more than what any other merchant would obtain for it. It is in evidence that the Company pays higher freights than others. Their establishments are more cumbrous and expensive than those of private merchants. Their agents have neither the expertness, vigilance, experience, or forecast of private agents, and many of them being employed in important political functions, would themselves think it an absurdity even to pretend to be so. If, under all these disadvantages, and when private merchants are obliged to content themselves with the slenderest profits, the Company were found to carry on trade without loss, the result would be sufficiently startling, and it would amount to a miracle if they were found to carry on with a profit. For the first few years after the opening of the free trade they exported European manufactures, and other commodities, in what experience has shown to have been a hopeless competition with the free trader. One article was taken up and relinquished after another, and for the last five years they seem to have prudently abandoned the whole of this branch of their commerce.

The great evil of the silk trade is the interference of the Company in the production of the raw material; an interference which has had the effect of virtually excluding private adventurers, and, consequently, the wholesome effects of an active and intelligent competition. The Board of Commissioners is fully aware that the Regulations of the monopoly for securing the Company's investment, as modified by Lord Cornwallis in 1793,* were in full force in Bengal, down to the year 1827, or for thirteen years after the legal opening of the trade, and that they were not abrogated until after repeated representations from the merchant of India, when the necessary orders were at length transmitted for that purpose from England, and, as it is generally understood, through the interference of the Board of Control. The modified Regulations of Lord Cornwallis enacted, that no party ~~contracting~~ to furnish the Company's investment should be permitted to work, either for himself or for a third party, until he had completed his engagements. It authorized the commercial agent to place the contracting parties under the surveillance of their native officers, in order to expedite the completion of their contracts. It forbade, under heavy penalties, private persons from taking goods supposed to be produced by the advances made by the Company; and it rendered it an actionable offence in such persons to dissuade any party from accepting the Company's advances for investment. These are a few of the provisions of a Regulation which, though no longer believed to be law, appears from the evidence given before the Select Committee, to have been in virtual existence down to 1830.† The effect of it has been to raise the price of silk with-

Mr. Crawford

Regulation XXXI of 1793.

† Report of 1831.

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out producing any improvement in quality. It appears from the account already quoted, that the Indian costs of the Company's raw silk in 1814-15 was but sicca rupees 419 per maund of about 74lbs., whereas in 1829-30 it was sicca rupees 497, showing a rise of about 18 per cent. If we go back to an earlier period, we shall find that the rise in silk has been immense. I have a Calcutta price-current by me of 1780, by which it appears that the price of the Company's raw silk was but sicca rupees 320 per maund, upon which the price of 1829-30 shows an advance of no less than 55 per cent. But even this was an enormous enhancement upon former prices, for in the very year specified, the Directors of the East-India Company complain that they were paying above 40 per cent. more for silk of the same quality than they had done fifteen years before.* With respect to the assertion which I have made, that no improvement has taken place in quality, I proceed on the distinct opinion offered on this subject by the witnesses examined by the Lords' Committee on trade of 1820 and 1821. It was then stated, that after the first establishment of the Italian mode of reeling in Bengal, which I think was about the year 1772, no improvement had taken place down to the period when the evidence was given, and I do not believe that it is alleged that any has since taken place.

From these facts, and many others which might easily be adduced, I do not hesitate to join in opinion with many experienced persons, in considering the Company's interference in the silk trade as the principal cause which has hitherto prevented India from supplying this country with a large and cheap supply of good silk, such as would enable us to compete on fair terms with other European nations who can command supplies of the raw material, not accessible to us on the same conditions. If an open competition had existed in silk, as in some other Indian articles, such as indigo and lac-dye, it is difficult to believe but that the same enhancement would have taken place both in its quantity and quality as in these. The quality has been stationary for near sixty years, and the quantity amounts in value, as estimated by the exports from Calcutta, to but *one-fifth* part of that of indigo, although the manufacture was established above twelve years earlier.

In 1817, the home authorities sanctioned Regulations proposed by the Indian Government for imposing a duty of three rupees per maund on salt, equal to about 4s. per bushel; and of 24 rupees per seer on foreign opium, equal to about 24s. per pound weight. The avowed object was the protection of the Company's monopolies of these two articles. These enactments have all the appearance of being at direct variance with the provisions of the Act of Parliament, which expressly directs "that all goods, wares, and merchandize of or belonging to the said Company, exported or imported from or into any parts or places under the government of the said Company in the East-Indies, or other places within the limits of the said Company's charter, shall be subject to the payment of the like rates, customs, and duties of import and export as the goods, wares, and merchandize of the same kinds or sorts exported or imported in private trade, under the authority of this Act, are or shall be subject or liable to be charged with."† The operation of these Regulations, as far as salt is concerned, is exactly the same as if His Majesty's Government were to throw open the tea-trade on a specific duty, for example, of 3s. per pound to all private merchants, permitting the East-India Company to import the article duty free. In this case, the Company would receive as a profit the whole amount of the duty, and no tea could be imported unless the Company's profit exceeded the amount of such duty. The unfair profit received by the cultivators of tobacco in Ireland, until the Act passed last year, prohibiting the growth of this article, is another illustration exactly in point. To fulfil the intention of the Act of Parliament, the same specific duty ought to have been levied on Indian and English salt, and the Company's monopoly to have been abandoned; a course which would not only have been consistent with the Act, but with sound policy.

The

* 9th Report, House of Commons, 1785.

† 33 Geo. III. c. 155, s. 24.

The fee demanded from a private person proceeding to India to reside under covenants, is the same as that demanded from a captain in the army, or a writer, and more than twice that demanded from a subaltern officer; and the fee demanded of the description of persons called "Free Merchants," is twice as much as that demanded of a covenanted civil servant of the rank of a factor.

That it is injurious to the private trader is my most decided opinion; and in this I am borne out by the testimony of the London merchants (see Resolutions, dated 2d March 1830), several of whom have had much practical experience in India as well as in England.

Mr Laupent

MEMORIAL OF LONDON MERCHANTS.

To the Honourable the Court of Directors of the United East-India Company.

Honourable Sirs,

WE, the undersigned merchants and agents in London, connected with the trade of the East-Indies, beg leave to acquaint your Honourable Court, that urgent representations have been made to us by certain British merchants in Calcutta, on the subject of the very serious disadvantages which the private traders have to encounter in their endeavours to procure articles of the produce or manufacture of the interior of India, for the purposes of a return investment, in exchange for the produce and manufactures of this country, in consequence of the existing commercial regulations of the Bengal Government.

Impressed with the importance of these representations, we have comprised them in the following statement, to which we take the liberty of soliciting the attention of your Honourable Court:

It may be assumed that the Act 55 Geo. III., c. 155, by which the charter of the East-India Company was modified and renewed, had distinctly for its object a separation of the several capacities of the East-India Company, as ostensible sovereigns of India, and as a trading corporation.

Any regulations, therefore, of the East-India Company, or its governments in India, tending to render its political power subservient to its commercial interests, may unquestionably be considered a contravention of the spirit of that Act. It is the object of the present remarks to show that, so long as the 31st Regulation of the Bengal Government of the year 1793 remains unrepealed, the East-India Company avails itself of its political authority to increase its mercantile profits; and by narrowing, if not altogether excluding competition, secures to itself an undue preference over the private trader.

That Regulation is intitled as follows:

"A Regulation for re-enacting, with modifications and amendments, the rules passed on 23d July 1787, and subsequent dates, for the conduct of the commercial residents and agents, and all persons employed or concerned in the provision of the Company's investment."

And the following is an analysis of its provisions, so far as the public is interested:

"No person in balance to the Company, in any transaction connected with the provision of its investment, or under engagement, can withdraw from its employ until such balance be paid or goods delivered." Sec. 2. "Persons who have dealt with the Company on account of its investment, must give the previous notice of two weeks before they can withdraw." Sec. 3, cl. 3. "The goods manufactured by persons under engagement or indebted to the Company, are liable first for the claims of the Company; the parties cannot work for themselves or others. Penalty." Sec. 3, cl. 4 & 6.

"When a contractor has not performed his contract for delivery of goods, he is to be put under the restraint of poons." Sec. 3, cl. 5. "List of persons employed in the Com-

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pany's investment to be exposed in the cutcherry of the pergunnah, to be regularly corrected, and sent quarterly to the Court." Sec. 4.

"Penalty for persons who may buy of the producers, with a knowledge of their engagements to the Company, the knowledge to be evidenced by circumstances, or the fact of the goods having the Company's mark upon them." Sec. 5.

"Persons not to interfere in any way to prevent people from treating with, or taking advances from, the Company." Sec. 6. "Officers of Government, landholders, and others, are not to behave with disrespect to the commercial residents or their officers, and to afford assistance for the protection of persons employed by the Company, and the security of the investment." Sec. 7.

"No person employed in the provision of the Company's investment shall be liable to be summoned by a zemindar or his officer on account of the ground-rent. The goods and advances belonging to the Company shall not be distrained for ground-rent." Sec. 9, cl. 2.

"Persons prosecuting individuals employed in the Company's investment, must allege the fact. The prosecuted exempted from the ordinary process of the courts, and to be proceeded against through the commercial resident, or his deputy appointed by him. These may tender security themselves, or decide on the sufficiency of that tendered by the prosecuted." Sec. 10, cl. 1.

"Persons employed in the Company's investment not liable to the ordinary criminal process." Sec. 10, cl. 4 and 5.

"In cases where manufacturers are employed by several parties *other than the Company*, they shall deliver goods according to priority of engagement." Sec. 11.

"Where a decree may be passed against a person employed in the Company's investment on an engagement subsequent to the origin of the party's dealings with the Company, it shall provide for the prior satisfaction of the Company's claims. Before execution of any decree against a person registered as employed in the Company's investment, the judge shall require the commercial resident, 1st, to state whether, at the time of the engagement decreed, the party was in the employ of the Company; 2d, to state whether the Company have any and what claim on him; 3d, to prove such claim. The claim of the Company shall be first made good out of the defendant's property, whose person shall not be liable to attachment for the claim of the individual." Sec. 12.

"The commercial resident, in dealing on account of his own private trade, shall not make the *Company's* prices the standard of his own." Sec. 15, cl. 4.

When it is considered how strong the habitual feelings of deference to authority are in India, and the mode in which the raw produce or manufactured goods of that country are obtained, namely, that of advance, the character assigned to this Regulation in the preceding paragraph will not be thought too strong. By it, no persons in balance to the Company, or engaged in any way in the provision of their investment, can withdraw from their employ; they cannot work for others or for themselves. If they do not fulfil their contract they are put under the restraint of peons, and the goods they manufacture, or their articles of produce, are liable *first* to the Company, although they may be indebted to others: thus, if a private merchant has contracted with a producer and made advances, the moment the latter gets his name enrolled in the list of those employed in the provision of the Company's investment, the Company take precedence, both in obtaining his produce and preventing his working for any other person. Inducements are, moreover, held out by certain immunities which are granted to those employed under the Company. Sec. 6 and 7 directs the officers of Government, &c. to afford them protection. By c. 2, s. 9, no person so employed shall be liable to be summoned for ground-rent: and by s. 10 such persons are exempted from the ordinary process of courts of justice, and can only be proceeded against through the commercial resident who has the charge of the Company's investment.

Whilst

Whilst the Company in their commercial capacity enjoy the restrictive privileges which the Regulation in question confers, it can hardly be denied that they possess a virtual monopoly in every article of the internal trade of India which can be selected for investment.

Raw silk, saltpetre, and cotton, are at present the principal articles of trade which the Company purchase in the interior through the agency of their commercial residents.

It has long been a subject of great complaint with the private merchant that he was unable to obtain a sufficient supply of raw silk; and the relative proportions of the import by the Company and private traders of this article, now become of great importance to a rising manufacture in this country, will illustrate the correctness of the conclusions deduced from the provisions of the Regulation under examination. The Company, under the exercise of this assumed authority, shut out the private trader from a fair competition in the purchase of this important article, and thereby securing to themselves a monopoly of the industry of the native population, they check that excitement to exertion, and consequently to production, which the simultaneous demands of the private merchants and the Company, if placed upon an equal footing, would necessarily create. Muslins, piece-goods, and other articles, have been and may be again objects of the Company's investment, as their funds accumulate, and we have recently seen their attention directed to indigo; so that if they were to bring into general exercise the power assumed under the Regulation now complained of, they might effectually crush the enterprize of the private merchants, exclude them from the possibility of effecting returns for the increasing trade to that country in British manufactures, and curtail the general advantages which would otherwise be derived by Great Britain and India from the connexion subsisting between the two countries.

It ought also to be observed, that whilst the private trader is thus excluded from a fair competition with the Company, the Company's commercial residents are permitted to engage as agents in the purchase of goods, and derive from their official influence an obvious advantage over any private competitor.

In forwarding to your Honourable Court the above statement, we cannot refrain from respectfully repeating, that the principle on which it proceeds is, that the Regulation in question, by giving undue advantage to the Company in their commercial character over the private merchant, is contrary to the spirit and letter of the Act by which the trade of British India was opened to the public, and opposed to the present liberal policy of the times. It appears to us that it was not the intention of the Court of Directors on the passing of that Act, that any existing Regulation having such a tendency should remain in force; and this may be inferred from the instructions transmitted by the Honourable Court to the Bengal Government in their public letter under date the 6th September 1813, para. 23, wherein they observe, "We cannot omit, upon the present occasion, expressing our expectation that all our servants shall conduct themselves with liberality and candour, and act up to the full spirit of the Legislature; so that if the traders should be disappointed in their views, they may have no ground for imputing their disappointments to any deviation on our part from the principle on which the trade is opened to them."

It may, however, be alleged, that the Honourable Company, without contending for their rights to the powers enjoyed by them under this Regulation for the purpose of commercial rivalry with the private traders, may fairly demand their continuance as indispensable to the regular and certain remittance of that part of the revenues of British India applicable to the payment in this country of territorial and political charges, which, being connected with the sovereignty of the Company, the Regulation is considered justifiable, and consonant therefore to the provisions of the Act.

The question thereby assumes a new shape, and the parties at issue will be, not the East-India Company, as merchants, against individual merchants, but the East-India Company, acting for the benefit of the people of India, against merchants influenced by their

their own particular interest, and therefore that the private interests of the latter should be made to yield to the more extensive benefit to be reaped by the whole Indian community.

If this argument were sound it would be a conclusive bar to the prayer of the private merchants; but they contend that it is altogether untenable and incorrect upon general principles, and that the circumstances attaching to the particular case in question do not form any exception thereto. The object of the Company is, how best to supply funds in this country to meet their present and growing expenses of a political nature. Upon general principles, it can scarcely be doubted that, to enable this remittance to be made with the least burthen to the people of India, the wisest plan would be to encourage the increase of capital in India; to insure its distribution into the most natural, and therefore the most beneficial channels; and, by wise legislation, to promote the cheapest cultivation of India produce, and the best mode of its remittance to this country.

To effect this, it appears to us expedient that the restrictions placed by the Regulation in question upon the industry of the native population should be removed, and a free and unshackled competition allowed to the private merchants, correspondent to the principles on which they were admitted by the Legislature into a participation of the trade with India.

We have the honour to be, &c.

(Signed)	FLETCHER, ALEXANDER, & Co.	R. SCOTT, FAIRLIE, & Co.
	COCKERELL, TRAIL, & Co.	INGLIS, FORBES, & Co.
	BAZETT, FARQUHAR, CRAWFORD, & Co.	SMALL, LANE, & Co.
	PALMERS, MACKINTOSH, & Co.	WM. & C. TARBUTT.
	RICKARDS, MACKINTOSH, & Co.	FINLAY, HODGSON, & Co.
	W. J. & J. BURNIE.	Z. MACAULAY & BABINGTON
	M'LACHLAN, MACINTYRE, & Co.	HUNTER & Co.
	FAIRLIE, BONHAM, & Co.	H BLANSHARD.

London, June 30th, 1825.

In India the deference paid to the sovereign does practically give the benefit of pre-emption to the Company in whatever articles they deal.* In the production of silk, notwithstanding their recent measures to prevent abuses, these still exist; and the Factory bad debts and losses are supposed to be very different indeed from the statement given in the Parliamentary Return, No. 9, p. 11, Oct. 1831.† The high price of production, which has gradually risen from ten to fifteen rupees per seer, is noticed by the Board of Trade; and whilst this business is managed by public servants, remunerated by commissions on their produce, there will be waste and extravagance, and an undue excess in quantity.‡

* See Papers and Memorial of London Merchants on Advances.

† Making the balance written off for bad debts 15 Lsd sicca rupees from 1809 to 1829.

‡ See Evidence.

AN ACCOUNT of all Sums written off as Losses, and of all Outstanding Balances standing in the Books of the several Commercial Agents, from the Year 1809-10 inclusive, to the latest Period to which the same has been received, on account of the Investment of Raw Silk.*

	LOSSES Written off.			Fines from Contractors for Silk, Sale of Old Materials, Chapman, &c. &c.		
	S. Rs.	l.	p.	S. Rs.	l.	p.
1809-10	—	—	—	2,816	1	1
1810-11	—	—	—	8,461	0	11
1811-12	—	—	—	3,708	4	1
1812-13	—	—	—	5,650	14	9
1813-14	—	—	—	8,005	3	3
1814-15	32,088	4	0	—	—	—
1815-16	—	—	—	3,142	8	10
1816-17	—	—	—	4,675	14	8
1817-18	—	—	—	1,570	11	10
1818-19	—	—	—	1,978	10	6
1819-20	—	—	—	5,987	3	11
1820-21	92,437	4	1	—	—	—
1821-22	—	—	—	11,211	9	6
1822-23	—	—	—	12,005	4	1
1823-24	—	—	—	14,272	15	6
1824-25	—	—	—	5,677	8	3
1825-26	—	—	—	3,573	13	6
1826-27	—	—	—	16,053	2	9
1827-28	—	—	—	6,963	0	8
1828-29	6,780	10	7	—	—	—
	1,31,306	2	8	1,15,854	0	1
NET LOSS	S. Rs.	15,452	2	7		

The above are the sums written off as Losses or Gains which have been ascertained to attach exclusively to Raw Silk. In the other items written off in the period it is not distinguished to what description of goods the several amounts have reference. In the amount of Outstanding Balances upon the books of the Commercial Agents transmitted to this country, those balances which may have arisen from advances made on account of the provision of Silk cannot be distinguished from advances on account of other articles of investment provided at the several commercial residencies; a Return, therefore, of the Outstanding Balances of Raw Silk cannot be furnished.

(Errors excepted)

(Signed) T. G. LLOYD.

East India House, 3d October 1831.

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Mr. Rickards

In a publication of mine in 1813, sundry extracts are given from the Diary of the Commercial Board at Surat, in which the following facts will be found to be fully substantiated, as the ordinary course of proceeding of the Company's commercial servants, between the years 1796 and 1811, viz. * "That the Surat investment was provided under the most rigorous and oppressive system of coercion; that the weavers were compelled to enter into engagements and to work for the Company, contrary to their own interests, and of course to their own inclinations, choosing in some instances to pay a heavy fine rather than be compelled so to work; that they could get better prices from Dutch, Portuguese, French, and Arab merchants, for inferior goods, than the Company paid them for standard or superior goods; that this led to constant contests and quarrels between the agents of the foreign factories and the Company's commercial residents, and to evasion and smuggling on the part of the weavers, for which on detection they were subject to severe and exemplary punishment: that the object of the commercial resident was, as he himself observed, *to establish and maintain the complete monopoly, which the Company had so sanguinely in view, of the whole of the piece-goods trade at reduced or prescribed prices*; that in the prosecution of this object, compulsion and punishment were carried to such a height, as to induce several weavers to quit the profession; to prevent which, they were not allowed to enlist as sepoys, or even on one occasion to pass out of the city gates without permission from the English chief; that so long as the weavers were the subjects of the Nabob, frequent application was made to him to punish and coerce weavers, for what was called refractory conduct; and when severity was exercised towards them, the Nabob (who was but a tool in the hands of the British Government) was desired to make it appear as the voluntary act of his own government, and to have no connexion with the Company or their interest, lest it should excite ill-will or complaint against the Company's servants; that to monopolize the piece-goods trade for the Company at low rates, it was a systematic object of the resident to keep the weavers always under advance from the Company, to prevent their engaging with other traders; while neighbouring Princes were also prevailed on to give orders in their districts, that the Company's merchants and brokers should have a preference to all others, and that on no account should piece-goods be sold to other persons; that subsequently to the transfer of Surat to the British Government, the authority of the Adawlut (our own court of justice) was constantly interposed to enforce a similar series of arbitrary and oppressive acts."

As long as the Company continued to trade in piece-goods at Surat, this was the uniform practice of their commercial servants. It may be taken as a specimen of the practice of other factories, and nothing more than the natural consequence of uniting power and trade in the same hands.

In Lord Wellesley's well-known letter of 19th July 1804, to the Madras Government, a similar course of arbitrary proceeding is detailed as being the practice of the commercial factories under that Presidency. If reference be had to that letter, it will be seen, on the faith of the highest official authority, how the power of the sovereign has been arbitrarily and habitually exercised, not only to favour and promote his own commercial dealings, but to throw obstructions in the way of private enterprise, fatal to the interests and pursuits of the regular and more legitimate traders of the country.

In the districts subject to the Company's government in the west of India, yielding cotton, the same exercise of power was uniformly displayed, up to 1801-15, to sustain and promote the Company's commercial operations. A large quantity of cotton being required annually for transmission to Canton to barter for teas, the Company's government abroad compelled the inhabitants of their own districts to give up the whole of their produce, one half as revenue, that is, in discharge of that enormous land-tax fixed at one-half the gross produce of the soil, and the other half at a price fixed by the judge, the collector, and the commercial resident of the district; and in which the ryots or sellers of the

* Vide Appendix 5 of Rickards' Speeches, 1813, and Evidence, July 1831, Ans. 2846, whence this quotation is taken.

the cotton were not allowed to have a voice. These proceedings were explained by me in a memorial to the Court of Directors in September 1812, of which, to save the trouble of reference, an extract is annexed to this answer.* Orders, it is said, were sent to India about the year 1814 to alter this system, to what extent I know not; but it is more than probable that coercion or influence, or both, are still exercised, as the same spirit prevails in every other part of the Company's dominions. I cannot explain myself better on this head than in the words of an answer to my examination of July 1831:† “A commercial resident, anxious to promote the Company's interests, or dreading the consequences of disappointment in completing the Company's investment, naturally desires to secure in its favour all the advantages which power can give it. To this end arbitrary and oppressive acts are encouraged or connived at, till the commission of them comes to be considered as zealous performance of official duty; and this must ever be the case where power and commercial dealings are committed to the same hands.”

In Mr. Saunders' evidence, of March 1831,‡ this spirit is stated to prevail, and the most arbitrary and oppressive acts to have been committed, up to the year 1829, in those districts of Bengal where the Company's silk factories are established. Mr. Saunders' evidence is very important, in distinctly showing, not only that a practice very similar to that above described as the former practice at Surat prevailed in the Bengal silk factories up to the latest period, but that the Company's interference had the effect of raising prices upwards of 40 per cent. between the years 1815 and 1821; and that this high price continuing, so that great losses were sustained on the sales in England, an attempt was made in 1827, by an equally arbitrary proceeding, to reduce the prime cost of the article, and orders were accordingly given to cause it to be fixed by the *buyers* of the commodity, without the least reference to the will or the interest of the *sellers*.

The evils arising out of the unnatural union of power and trade in the same hands, is also ably explained in the evidence of Sir Charles Forbes,§ and illustrated by examples highly deserving of attention, such as the case of Mr. Wilkinson's losses by an arbitrary act of the local Government; the various monopolies in India, including the cinnamon monopoly on the island of Ceylon, the details of which, as given by Sir Charles Forbes and confirmed by Mr. Stewart, clearly show that the evils alluded to are not peculiar to the Company's territories, but are equally ascribable to the King's insular government; in short, prove to demonstration, that when a sovereign exercises trade, or a merchant is allowed the use of power, that power is, under all circumstances, and by whomsoever administered, sure to be abused, and perverted to the most pernicious purposes.

EXTRACT from R. RICKARDS' Memorial to the Court of Directors, dated 9th Sept. 1812.

GUZERAT COTTON.

“32. THE next occasion of the Honourable Court's displeasure was a representation by the house of Forbes and Co., and Bruce, Fawcett, and Co. in January 1810, of the ruinous price which cotton had attained in 1809, begging Government to withdraw its competition for a season from the market, and offering to supply, at its actual cost, the quantity of cotton they might require to purchase for the Company's China trade in the current year, a proposal in which Government then thought it expedient to acquiesce.

“33. On this head it will only be necessary to premise that the Company take the cotton of their own districts in Guzerat in kind, partly as revenue and partly otherwise, at a reduced price, and that for any additional quantity wanted they enter the general market

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* Vide Evidence annexed. Also Evidence, April 1831, Ans. 2321, et seq.

† Vide Examinations, 19th July 1831; and for this Extract, vide Ans. 2846.

‡ Vide Evidence, March 1831, Ans. 2000 to 2091.

§ Vide Evidence, April 1831, Ans. 2313 to 2550.

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as purchasers; in which view the merchants thought that the Company's competition was, at least, one cause of the high prices of which they complained, and solicited that the effects of its removal might at all events be tried.

"34. In the Honourable Court's animadversions on this transaction they are pleased to assume the following as facts, viz. That the Company exercise no monopoly in their own cotton districts, or throw the least obstruction in the way of private buyers. That their servants only take from these districts the amount of the established revenue in cotton. That this is accounted for to the ryots at a price equivalent to the general market rate of the season; and that they do not exercise power or influence to get the commodity 'at a less price than the said market rate, or than the owners are content to sell it at;' admitting, at the same time, that if this were really the case, there 'would then be at least a consistency between the alleged cause and the alleged effect.' Their competition in the general market is also supposed to be attended with no injury whatever in its effects.

"35. From some of the more partial statements entered on the public records, it is possible these inferences may have been deduced; and I have no doubt that these are both the conviction and intention of the Honourable Court, as well in reference to their own ryots as the merchants residing under their authority in India. But the real state of the case is widely different:—Their records contain unequivocal proofs of the following facts, as I pledge myself, if necessary, to exhibit in the official reports of their servants, and an uninterrupted series of orders by the local Government.

"First, That the Company monopolize the cotton in their own districts, or at least of the tulput or government lands, taking not only the whole revenue of this district in cotton, but the 'surplus' produce, at the reduced price fixed by their servants. Thus, let us suppose the whole produce of the tulput district to be as 10, of which the grain produce is 2 and the cotton 8.

"The Company's share of revenue will be in all 5, but of the cotton only 4

"The remainder of the revenue is grain, convertible, according to the established usage, into a money-payment; but for this cotton in kind is also substituted, and therefore takes another share, or 1

"There then remains 'a surplus,' the unquestionable, exclusive, and allowed right of the cultivators, of 3

over which the Company can have no possible claim but that of absolute force; yet this is also taken from the ryots at a reduced price fixed by their servants, making — 8

or the whole cotton produce of the district, without leaving any portion of the avowed share of the ryots at their own free disposal.

The produce of the tulput lands of the Broach collectorship in cotton is estimated on record at 12,000 or 14,000 bales; that of the free lands at 3,000; so that the Company monopolized in this collectorship, in the first instance, four-fifths of the whole produce. The remaining fifth belongs to the actual proprietors of estates, called Grassias and Wuzcefadars, and whose rights as such are undisputed: of these it is recorded in 1808, that the commercial resident attempted to take their produce on the same term as that of the tulput lands; the Wuzcefadars strenuously resisted, the commercial resident loudly complained, a reference was made by order of Government to the judge of the district; and through his interference, the Wuzcefadars conformed to what was called the common practice of the pergunnah. It would seem from the record, that the Wuzcefadars only submitted to this system in 1808; though the orders of Government, as seen in their proceedings, uniformly required the whole produce to be appropriated to the use of the Company.

"Secondly, That this monopoly is a continuation of that established in 1791, under Scindia's government, and retaining some of its features, is thereby calculated to keep up the

the original sense of its injustice, and to level our Government, in the estimation of the natives, with the despotism which preceded it. The plea of perpetuating the practice of the old government is only good in relation to usages whose proved utility may have rooted them in the attachment of the people; but no justification of the rapacious exactions of a Mahratta souzdar, and the more especially when even the pretence of antiquity cannot be advanced to lay claim to our respect.

“Thirdly, That this monopoly has been uniformly authorized, and even required by the orders of Government, from the first of our footing in Guzerat, to the positive exclusion of all private buyers from the Company’s districts; though such a measure is now declared to be contrary to the intention and understanding of the Honourable Court.

“Fourthly, That this monopoly has had the effect of nearly doubling the price of cotton in Guzerat.

“Fifthly, That if the Company were now to relinquish this monopoly, and the trade were thrown open, the price would materially fall; whence it follows, that the Company’s interference not only raises the market price of the article to buyers generally, but that the Company’s agents still withhold from the ryots that market price which their own competition has materially contributed to enhance.

“Sixthly, That this cotton is taken from the cultivators in the first instance, without any price being either fixed or intimated; the reduced price is only pronounced at the close of the season, after all the cotton has been disposed of, and sent off to Bombay; it not being right, as the report observes, ‘to fix it at the commencement of the season, when the price is high and expectation great, lest it might, perhaps, create some degree of discontent among the ryots.’

“It follows, from this rule and the orders of Government on which it is founded, that the price of cotton is fixed by the agents of the buyers alone, *i. e.* by the judge, the collector, and the commercial resident, who exercise the whole civil authority of the district over, generally speaking, a slavish, patient, and forbearing people; and that the settlers are, in reality, allowed no voice in the value of their own commodity, or even suffered to know what they shall get for it, till after it has been far removed from their reach and the country, by previous exportation to Bombay.

“Seventhly, That orders were issued for a further reduction of price, if practicable; and that the servants to the northward thought it their duty, in pursuance of these orders, to offer it as their opinion, that a further reduction of ten or twelve per cent. might be unobjectionably effected.

“Eighthly, That this further reduction of price was not meant to be attended with a corresponding diminution of revenue, although the payers of this revenue are avowed to be the only sufferers by the reduced price of their cotton.

“Ninthly, That Government, on this very report, and in reference also to the Honourable Court’s orders of the 30th April 1806, expressed in December following their expectation, always tantamount in its effects to an order, to the northern servants, that the price of the Company’s cotton to the ryots should be fixed at ten or twelve per cent. lower than the same class of people get for it in the neighbouring Mahratta pergunnah. The Company’s price to the ryots has consequently been always under, and in 1809 was thirty rupees per candy, or twenty-five per cent. under the general market rate. Whatever may be said of the Company’s right to the revenue cotton at this reduced price, it is for the Honourable Court to judge how far it should also be applied to the ‘surplus’ cotton, which the ryots have certainly an exclusive right to dispose of, if they please, in the general market; but which, contrary to the declared intention of the Honourable Court, it is thus seen they are positively restrained from selling:—and,

“Finally, That though the Honourable Court’s orders of 30th April 1806 evidently refer to a general reduction of the price of cotton, to save a branch of trade to the western

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side of India, which it was otherwise expected to lose, yet the views of their servants in India never extended beyond reducing the cost of that portion which was intended to constitute the Company's annual investments to China. It is remarkable that the object of the Honourable Court's orders was thus wholly defeated. They intended good, but produced in their operation a material aggravation of the very evil which the Court proposed to remedy. By their servants withdrawing a large portion of cotton from the ryots, or sellers, at a reduced price, and the other means resorted to, to give effect to these orders, the residue of the commodity became materially raised in price in the general market.

" 39. On the head of competition in the purchase of cotton I shall, for the same reason as adduced in the 36th paragraph, say but little. All I ever advanced on this head was, that the Company's competition was one, though not the sole cause of the high price which cotton had obtained in Guzerat; the undue competition of the private merchants another. The Honourable Court, however, insist on the latter fact, and deny the former altogether, on the authority of a report to this effect by the commercial resident at Surat; yet, if the Honourable Court will be pleased again to refer to the records of 1809, they will find the same commercial resident avow, in the very same year, and when not personally accused himself of injudicious acts or heedless purchases, that, 'on the 11th March he had every hope of purchasing cotton at moderate rates,' whilst, on the 25th following he adds, 'it has been unfortunate, however, that the Honourable Company's views were publicly known at Broach before he received his orders, and the consequence was such an immediate influx of competitors as to occasion a considerable rise in the market price. By withholding for a day or two, I, however, was enabled to conclude engagements for about 1,400 bales, packed at 150 to 151½ rupees per candy, being one to one and a-half less than it had risen to at first; but it immediately afterwards obtained 155 and 156 rupees, at which it has since continued.'

" 40. In 1798, the commercial resident at Surat was first employed to purchase cotton (I believe about 2,000 bales) for the Company. If the Honourable Court will please to refer to their diaries of that period, they will see a series of mysterious proceedings, with injunctions to the strictest secrecy in this trifling purchase, and merely that the price of the article might not be affected by the Company's competition, or obstacles thrown in the way by a knowledge of their intentions.

" 41. Just before I quitted the Council Board a letter was received from another commercial agent, ordered by Government to purchase timber, in which he remarks, 'I have, in consideration of the tendency which the Company's wants *always* have to raise the market, entrusted this business also to Mr. Crokonden's management, and he has sent trusty people, fully instructed, to make such arrangements as they may find practicable.'

" 42. To multiply proofs of this description is, however, quite superfluous, for the records are full of them.

" 43. Some years ago it was stated, on good authority, that seventy rupees per candy of cotton to the grower was equal to the average which grain yielded. In 1808, the Judge of Broach observes, that thirty rupees per bhar, *i. e.* seventy-nine and a half rupees per candy, would afford a good profit to the cultivator. At this rate the ultimate exporter might expect to get cotton at 100 rupees to 110 rupees per candy to the northward, and therefore 120 to 130 rupees in Bombay, at which rate it would admit of consignment to China; but when the northern price is so high, that the average of the season gives, as in 1809, 175 rupees per candy on the Bombay Green, there is an end of all profitable speculation to China by private merchants."

When I was in India, several treaties existed with Native Princes, in which, where any branch of the Company's trade was concerned, or likely to be promoted, stipulations were invariably inserted, either for a monopoly of such branch in favour of the Company, or to give the Company's agents a preference in their dealings therein over all private

private merchants. The history of Bengal contains a series of the most iniquitous proceedings founded on such treaties with the Nabobs of Bengal, both previous and subsequent to the year 1765. In my time the most arbitrary and unjust measures were in like manner followed up in other parts of India, of which a specimen is given in a preceding answer. Other instances will be found in my publication of 1813, in reference to treaties with the Rajahs of Malabar and of Travancore.* Various others might be quoted, all framed in the same spirit, and all as arbitrarily acted upon. I believe the same principles to be in force to the present day, of which some notable examples may be found in the history of late transactions regarding Malwa opium, and treaties with Malwa Princes. If, however, the Company's trade be now abolished, as I conceive it ought to be, as well for their own advantage as that of the public, this further improvement would result from it, that we should be relieved from the disgrace of these relations with independent or allied states, and from the stigma of imposing terms on them which nothing but the dread of our power could induce them to submit to. When, therefore, gentlemen urge that it is but just the Company should be allowed to enter the markets of India like all other traders, but with the advantages they naturally derive as merchants from the employment of their "large capital," and from long-settled commercial establishments in various parts, let the plausibility of this argument be compared with the numerous treaties, or articles of treaties, here adverted to, with the whole series of their commercial records, and the compulsive exercise of both their power and influence in the procuring of those goods in which they have chosen to deal; and then let any impartial arbiter say, if he can, whether the Company ever did, ever could, or are ever likely to enter the field of Indian Commerce as fair competitors;—the thing is absolutely impossible.

QUERY V.—WHAT is the System pursued by the Company in the conduct of their Commercial Transactions in England; and have their Proceedings proved prejudicial or advantageous to the general interests of Indian Commerce?

Answer.—THE goods imported into this country by the Company from India and China are sold at public sales regularly held, and their exports are chiefly purchased by contract, in nearly the same manner as the transactions of individuals are managed.

Mr Mackillop

As the Company are large importers of Indian produce to England, the market is very much ruled by their determination to sell or to hold, and thus an increased degree of uncertainty attends the prices of the articles they deal in, and the operations of private merchants are thwarted, their calculations defeated, and their interests injured.

Manchester Chamber of Commerce

The system pursued by the Company in the conduct of their commercial transactions in England is not much noticed or directly felt in this quarter; but they are considered dangerous competitors in some of their purchases, profit, on their own admission, not being always their primary object.

I am

Glasgow Chamber of Commerce

APPENDIX,
No. 4.
continued

Trade with India :
Answers to Queries.

Mr Bracken.

Mr Crawford

I am not acquainted with the details of their management at home, but I imagine that any body, constituted as the East-India Company is, must necessarily have the means of injuring the general interests of trade, by glutting or narrowing the market according to its own real or supposed advantage, or its expectations of embarrassing private competitors.

All exports to India having ceased for some years, this question can only refer to the Company's management with respect to the imports. This comes under two heads, the sales of their own imported goods, and the sales of those of private merchants. The same objections, though to a smaller degree, owing to the greater extent of the market, the greater number and the greater activity of the competitors, apply in England as in India to a trade carried on with the funds of the State, and avowedly without primary regard to profit. It perplexes and distracts all regular commercial speculation, and sets the ordinary calculations of regular trade at defiance.

With respect to the Company's management of the sales of private goods, I am not in possession of the details ; but I believe that considerable pains have been taken since the commencement of the present Charter for the accommodation of private merchants. The duty was repealed by the Act of 1813, the charges have been reduced, and the declarations of sales on many goods, instead of being periodical, are now governed entirely by the wishes and convenience of the proprietors. Notwithstanding these accommodations, it is to be inferred from the statement submitted to Parliament, that private sales are considered by the public more convenient than those effected under the auspices of the Company, for the charges and profits of the Company on the sale of private goods have gradually fallen off in amount from 1814-15 to 1828-29, having been in the first year £220,668, and in the last but £122,152.*

Under the former Charter, the Company was authorized to charge a duty of five per cent. on private goods, besides warehouse-rent and charges of management, and the goods could only be sold at the periodical sales of the Company, which by statute was empowered to regulate the conditions.† Had the system been persevered in, it is a matter of certainty that not a pound's worth of Indian goods would have been committed to the Company's management.

Mr. Larpent

The system recently pursued by the Company has been to obtain funds in England without direct trade ; and they have opened their treasury in London to receive money for bills on India, and have purchased bills in India on London, secured by goods consigned to them. The first of these measures failed, because they proposed to draw at a higher exchange than the parties remitting could afford to pay ; and the second has been very limited, and but for the state of the money market in Calcutta in 1830 and 1831, would have been nearly inoperative.

Liverpool East-
India Committee.

The import of tea being the most important part of the Company's commercial transactions in England, our observations will be principally directed to it.

The monopoly of this trade by the East-India Company is productive of almost incalculable loss to the country.

When trade is free the supply of commodities adapts itself to the demand without any interference

* Paper relating to the Finance and Trade of India and China, 1830, p. 48.

† 33 Geo. III. c. 52. s. 101.

interference of Government; but the Legislature, in order to ensure a regular supply under the monopoly, provided in 1784 that the Company should always keep a stock in its warehouses equal to a year's consumption, and it is in evidence (see Mr. Melvill Q. 4300, of 1830), that the tea remains, on the average, twenty months in the Company's warehouses before it is put up for sale. Now it is well known that fresh tea sells in every market in the world at a considerably higher price than old tea, and yet the regulation alluded to effectually prevents the British community from ever purchasing fresh tea.

It was one of the regulations under which the importation of tea was confined to the Company, that whenever the price on the continent of Europe should be below the price in this country, licenses for the importation should be granted to free traders. Now it appears by the evidence taken before the Parliamentary Committee as to the value of tea samples procured by the India Board from ports on the continent of Europe and the United States of America, that in any of those countries tea may be purchased very much below the price of the Company's sales. But the protection afforded by the Act of 18th Geo. II. against exorbitant monopoly prices, which have subjected the country to an enormous annual loss, has been withdrawn, inadvertently, we presume, on the part of Government, by the repeal of that amongst many other Acts relating to the customs, by the 6th Geo. IV. c. 105.

The upset prices of tea at the Company's sales are composed, in addition to the fair first cost, of loss on the Company's exports to China, and of rates of freight, and exchanges and charges, far beyond what the free trader would incur, thus making the upset price not what the Legislature intended it to be, but a fictitious estimate of the cost; the consumer however has no alternative but to pay the price, for there is no other party from whom he can purchase.

To China the British merchant is now prohibited from exporting the manufactures of his country, and the consequence is, that the Americans have for several years been, and are now, engaged in carrying on a very extensive and lucrative trade in the export of manufactures from Great Britain to China. (See the evidence of Mr. Bates, Mr. Brown, Mr. Everett, &c.)

The Americans likewise carry on a considerable trade in exporting Turkey opium from Europe to China, which the British merchant is prevented from doing.

The exports to China by the Company are stated in the evidence before the Select Committee to be laid in about six or seven per cent. dearer than by the houses which manage the American trade from this country to China (see Mr. Bates, 3383, of 1830); they are also conveyed at higher rates of freight than they would be by the private trade; these circumstances must necessarily tend to limit the consumption of such exports, by raising the price at which they can be afforded.

The most important of the Company's commercial transactions in England is in tea, and the system pursued in the conduct of that article is highly prejudicial to the general interests of the nation. At Hamburgh and the ports in Holland, as well as in North America, the average price, under the system of free trade, does not exceed 1s. 6d. per lb.; but in this country, the East-India Company, by their monopoly, exact an average price of 2s. 4d. per lb. exclusive of the duty, being 10d. per lb. more than what it is sold for at Hamburgh, in Holland, and North America, and what we should obtain it for if the trade was released from this oppressive monopoly. The high price which it occasions in this necessary article is far beyond the means of many, and is so important to all as to cause the necessity of the greatest economy in its use; but a reduction of 1s. 8d. per lb. (being 10d. in the price, and consequently 10d. in the duty) would enable millions to enjoy this cheering beverage, and at the same time would extend its consumption to more than double the quantity now required, thereby giving a most important addition to the revenue.

Hull Committee.

APPENDIX,
No. 4.
continued.

Trade with India:
Answers to Queries.
Mr Rickards.

In reply to this question, I would beg leave to refer the Board of Commissioners to Part IV. of my work on India, lately published, in which a sketch is given of the Company's commercial and financial history from the date of their first charter in 1600; but entering more into detail from the year 1765, or the date of the Dewanny grant. The former period exhibits the Company in a continued series of difficulties and contests, sometimes striving with enemies and rivals for superiority, and sometimes struggling for existence. Competition in trade was always their greatest dread, and often threatened them with extinction and ruin. They appear, therefore, at this time, to have contracted heavy debts both at home and abroad. Subsequently to the Dewanny grant, the Company's trade was supported by large sums annually furnished from the territorial revenues, till in 1793 a crore of rupees, or £1,250,000, was annually appropriated by Act of Parliament to this purpose; and in no printed or published account that I have yet seen, have these liberal advances been satisfactorily accounted for: the statute book, on the contrary, abounds with Acts of Parliament between 1765 and 1793, and afterwards to 1813, passed to relieve the Company's commercial distresses.* In and previously to 1813, all the great commercial towns of the kingdom called aloud for an opening of the Indian trade; the Court of Directors, on the other hand, vigorously opposed it. The discussions of that day may still be referred to, as containing useful and instructive lessons. The advocates of free trade not only set forth the most powerful arguments against the injustice and absurdity of monopoly, but insisted on their means of extending our commercial intercourse with India far beyond anything that had been effected by the East-India Company, and enumerating many of the manufactures of Britain that were likely to find a sale in the East. The Company, on the other hand, insisted that the expectations then entertained by British merchants as to the advantages of an open trade, were mere delusion;† that if opened, all who embarked in it would be ruined; that the abolition of the Company's commercial privileges would be the destruction of the whole Indian system; that the trade of India was carried to the highest pitch of which it was susceptible by the operations of the Company, and that any further extension of it, such were the prejudices of the natives, was impracticable; with many pages of declamation in the same strain. They further added, on the same occasion, that if the Indian trade were opened to the outports of Britain, the most ruinous consequences would ensue. "The immense interests," they observed, "which the port of London, with all its descriptions of merchants, tradesmen, tea-dealers, factors, brokers, dyers, packers, calenderers, inspectors, labourers, ship-builders, ship-chandlers, ropemakers, ship-owners, mariners, and all their train of establishments, warehouses, wharfs, docks, yards, premises, shipping, formed in the course of two centuries, would all be involved by the opening of the trade to the outports, the Company's periodical sales interfered with, and their very large property in warehouses and other buildings deteriorated; in short, all the institutions, public and private, of the capital for carrying on the Eastern trade, would be shattered or broken down.

These are the predictions set forth on both sides in this interesting discussion; and with the mass of facts now before us, it does not require uncommon sagacity to discover which of the parties in this contest were the true, and which the false prophets.

From this overstrained zeal of the Court of Directors (natural enough, it must be admitted) to protect the interests of their monopoly,‡ there can now be no question as to their proceedings in England having been conducted in error as to the true nature of this trade, and its susceptibility of increase, and that the limitations and restrictions hitherto imposed to favour the monopoly have, in a national view, proved highly prejudicial to the general interests of Indian commerce.

Although this discussion is now a matter of history, and chiefly of importance as a lesson or guide for the future, I have noticed it here for another purpose, and that is, to bring

* Vide Rickards' India, vol. ii. pp. 596 to 604.

† Vide Evidence, July 1831, Ans. 2747, et seq.

‡ Vide preceding answers, and documents referred to.

bring forward a grievance as connected with the system pursued by the Company in England, which has never yet been duly attended to. In the strenuous opposition given by the Court of Directors in 1813, to the opening of the trade, they persuaded Government at last not to allow of its being extended to more than twelve ports of the United Kingdom; and such is the case at present. The consequence is, that East-India goods bonded at any one of the said ports cannot be removed to any other port without the merchant trading therein paying the whole duty (and this duty in many instances enormous), as if the goods were taken out for actual consumption. Indian commodities are thus subject to unjust restrictions from which all other goods are free, inasmuch as all foreign merchandize but East-Indian may be removed under bond to and from sixty-six different ports of the United Kingdom.

QUERY VI —Does the necessity of their effecting a large Remittance to England, without primary regard to Profit, operate detrimentally or advantageously upon Commerce, and to what extent; and could a similar Remittance be conducted through Private Agency, and with what effects?

Answer —The purchases made by the Company in India with the view stated, operate very detrimentally to the private merchant, and their proceedings must have proved prejudicial to the general interests of Indian commerce, from the sudden fluctuation in prices of produce which they have caused; similar remittances might be conducted through private agency without such injurious effects. Glasgow Chamber of Commerce.

The Company's purchases of produce without a primary regard to profit, have had and cannot fail to have a very injurious effect upon commerce; for the fact of so powerful and lavish a body being known to be desirous either of purchasing or contracting for any particular description of produce, has generally had the immediate effect of raising its price, and thereby of excluding the merchant, who buys only with this object in view. In many cases the rise in price from this cause has been destructive of the interests and prospects of the private merchant. We see no reason to doubt the practicability of effecting remittances to this country, both through private agency and otherwise, to the full extent of the Company's wants, with perfect security to themselves, and without the disadvantages which have hitherto attended their remittances in produce. Liverpool East-India Committee

The necessity of such a remittance is in itself an evil, and seems to me a powerful reason for making it by the cheapest channels. On the grounds stated in the answer to question the 4th, I believe those channels will be found in the transactions of private trade which lead to reduction in cost and increase of consumption. To the extent of such results would be the advantage to commerce generally, and to the Indian Government in particular. Mr. Bracken

The commercial residents are comparatively ignorant of, and indifferent to, the state of the home market. They have in the collector's treasury a ready supply of cash for their purchases, have no very pressing interest in the result of their consignments, and consequently may be reasonably expected to overlook many circumstances to which those engaged in trade, as a pursuit involving their success in life, must necessarily devote the minutest attention.

APPENDIX,

No. 4.

continued.

Trade with India :

Answers to Queries

Manchester Cham-
ber of Commerce,
and East-India
Committee

The necessity of effecting a large remittance to England, without primary regard to profit, must unquestionably operate detrimentally to commerce, and to an extent proportionate to the extent of the operation. The object of commerce being to distribute over the globe, at the cheapest rate, all the various commodities applicable to the comfort and enjoyment of mankind, whatever disturbs the natural equilibrium of prices must be injurious to commerce. To make heavy remittances, without regard to profit, must, of necessity, unduly advance prices at certain periods and places, and as unduly depress them at others; and these fluctuations will be found to exceed in extent the amount of the disturbing cause, and will produce further injurious effects, through the uncertainty and hazard they occasion to the commerce pursued, on other principles, by the private merchant. The second part of this query, *viz.* "could a similar remittance be conducted through private agency, and with what effect," is perhaps the most important and the most difficult question in the series. This Board, however, does not hesitate to answer, that, to the best of its knowledge and judgment, such remittance could be conducted by private agency, and it believes with effects which on the whole would be beneficial. It must be borne in mind, that the commodities which constitute the remittance referred to are already brought from the East to this country. The practical inquiry therefore is, would this branch of business be taken up by private merchants, if it were abandoned by the Company, and how could the proceeds be placed at the disposal of the Company? The primary requisites for the undertaking are capital and enterprise; the existence of which to the necessary extent, it is presumed, will not be doubted. The next requisite is adequate motive, and in this the difficulty may be supposed to lie; for it being understood that the Company often import with a certain prospect of loss, from the necessity they are under of providing for their large periodical payments in England, business which must be undertaken with such a prospect would not be entered upon at all by private merchants. But the necessity on the part of the Company to have such remittance made, combined with the resolution of the private merchant not to trade, knowingly, to loss, would, it is believed, overcome the difficulty, by operating conjointly on exchanges and prices, and so produce that relative correspondence of markets which admits of and stimulates to healthy and active business.

Mr. Mackillop

The amount invested in indigo being in some years small and in others extensive, has occasioned fluctuation in prices, and proved prejudicial to the regular course of trade. The large extent of the Company's purchases in latter years, has occasioned indigo to sell at high prices at Calcutta, and thereby encouraged an increase in the cultivation, so as now to yield a supply beyond the consumption, necessarily followed by ruinously low prices in this country.

It is not improbable individuals may have been deterred from entering into the manufacture of silk from believing the Company would always provide a supply equal to the demand in Europe, and knowing that the extent of the investment would be less regulated by the prudential considerations that govern the transactions of private merchants, than by the necessity the Company are under of bringing home extensive funds annually.

Mr. Larpent.

When the Company goes into the Indian market to buy, for remittance, indigo, sugar, or cotton, they fix the price for the season, and that price is seldom calculated upon the state of the home market; for the sovereign does not trade on the principles of an ordinary merchant, to whom profit on the average is the condition of supply. In the natural course of trade, if there be an excess of production on any article, the merchant must speedily adjust the balance between supply and demand, or he is ruined. Not so the sovereign, whose servants press business to increase their commissions, and in whose concerns the action of a commercial loss upon such a mass of revenue and political resources is not soon perceptible, and when felt, its recurrence is not soon prevented, and certainly

certainly not prevented without a very severe pressure upon the community, from the extent of its dealings. The article of indigo is an instance of the correctness of the above reasoning.

The Company raised the prices in Calcutta by buying for their remittances without regard to the state of the home market or to the consumption.* Thus a stimulus was given to production, and we are now suffering from the re-action. The Company saw their error (in 1830), and retired from the trade; and the depression in price occasioned by this change of system has been ruinous. In the home market, too, the effects of a body like the Company trading are very injurious; what they buy, without regard to profit and loss, they sell also in the same manner, without judgment, and often at an enormous sacrifice.

STATEMENT of the Annual Produce of *East-India* Indigo for twenty Years, commencing in 1811 and ending 1830; also the Annual Consumption during the same Period, computed by an Average of Four Years; and the Stocks in the Public Warehouses at the close of each Year.

YEAR.	Annual Produce of the East-India Company's Possessions.	Annual Consumption, being an average of the previous Four Years.	Stocks in the Public Warehouses at London and Liverpool 31st December.
	Chests.	Chests.	Chests.
1811	21,000	22,200	26,900
1812	23,500	22,500	29,500
1813	22,800	22,800	24,500
1814	28,500	23,000	24,900
1815	30,500	23,200	30,400
1816	25,000	26,900	25,700
1817	20,500	27,000	23,500
1818	19,100	26,500	24,000
1819	20,700	26,400	19,700
1820	27,200	24,200	14,500
1821	21,100	25,300	9,800
	238,900		
	23,890		
1822	25,700	26,000	8,200
1823	29,800	25,300	13,000
1824	24,100	26,500	12,200
1825	43,500	23,500	16,400
1826	28,000	27,300	22,300
1827	45,300	28,900	22,800
1828	30,000	31,000	31,100
1829	43,200	33,000	31,200
1830	32,100	32,800	37,600
1831	30,000 suppose	34,500	35,700
	10) 331,700		
	33,170		

* See the following Statement, showing the Company's purchases in the face of increasing stocks at high prices, and increased quantity produced.

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries

AVERAGES of the VALUE of a CHEST of INDIGO.

Exchange in January at Calcutta.	—	—	—	Average Calcutta Price.
<i>s. d.</i> 2 0½	1823	£. <i>s. d.</i> 90 0 0	1822-3	263 a' 273 Rs. p' md. = average 268
1 11½	1824	110 0 0	1823	265 a' 285 — = — 275
2 0½	1825	140 0 0	1824	216 a' 226 — = — 221
2 2	1826	100 0 0	1825	220 a' 250 — = — 235
2 0	1827	110 0 0	1826	262 a' 271 — = — 266
2 0½	1828	80 0 0	1827	230 a' 248 — = — 239
1 11½	1829	70 0 0	1828	260 a' 285 — = — 272
1 11½	1830	55 0 0	1829	206 a' 217 — = — 211
2 0	1831	45 0 0	1830-31	174 a' 182 — = — 178

—	Price per Maund.	Exchange in January.	Cost per Chest in January.	Price in London.
	<i>Rupees.</i>	<i>s. d. Maunds.</i>	<i>£. s. d.</i>	<i>£. p' Chest</i>
1822-3	268	1823 2 0½ a' 3½ p' Chest	94 15 6	90 p' Chest 1823
1823-4	275	1824 1 11½ — —	94 3 2	110 — 1824
1824-5	221	1825 2 0½ — —	80 11 5	140 — 1825
1825-6	235	1826 2 2 — —	89 2 1	100 — 1826
1826-7	266	1827 2 0 — —	93 2 0	110 — 1827
1827-8	239	1828 2 0½ — —	87 2 8	80 — 1828
1828-9	272	1829 1 11½ — —	93 4 2	70 — 1829
1829-30	211	1830 1 11½ — —	72 6 2	55 — 1830
1830-1	178	1831 2 0 — —	62 3 0	45 — 1831
	9)2165(240 18			
	36			
	36			

COMPANY INDIGO.

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries.

Purchased in Season.	Sold in	Average Sale Price.
1819-20	1820	£. s. d. 0 7 6
1820-21	1821	none purchased.
1821-22	1822	0 10 9½
1822-23	1823	0 10 2½
1823-24	1824	0 9 4
1824-25	1825	0 11 5½
1825-26	1826	0 9 1½
1826-27	1827	0 8 9
1827-28	1828	0 7 5
1828-29	1829	0 5 3½
1829-30	1830	0 4 3½

But though these evils are inseparable from the union of the commercial and sovereign character, the main question still remains unanswered. If three millions sterling are wanted in England for territorial purposes, how are they to be obtained? Perhaps the best way to find a satisfactory answer is, to analyse the present trade between England and India :

1st. There are required to pay the territorial charges in England ...	£3,000,000
2d. A demand for remittance of savings, private family expenses in England, &c., estimated, at least	1,500,000
3d. There is the return for the outward trade, about	3,000,000
Together ...	£7,500,000

These returns must be made through commerce, whether in the hands of the Company or of individuals. It is the produce of India that in some way or other must, when brought to England directly or circuitously, satisfy all these demands. The skill and management in effecting this object must materially affect the result, and with the result the prosperity of the trade both of India and Great Britain. If too great supplies of Indian produce are brought direct from thence, derangement at *first* in the sale markets at home, and *next* in the purchase markets abroad, are the inevitable consequences. If, to remedy this, specie be abstracted from India, a fall of prices in India will immediately ensue, which will stop the import into India of British manufactures, where introduction has been occasioned by their cheapness at home, and which cannot bear any fall of price in sale in India. In fact, the remittance trade of India has been for some time past a very dangerous one; the increased demand for remittance has already occasioned an over import of many Indian articles beyond the wants of the home market; and if this is checked by a substitution of bullion, the outward trade is injured, and India suffers from a change in prices, and in the value of all its property and produce.

In such a trade, therefore, every thing depending upon skill and judgment, every reasoning *à priori* should induce the Legislature to trust to individual interest rather than to the operations of a large company, especially if that company be sovereigns also; and to give the private merchant every advantage, no country, especially one yielding an article of such universal consumption as tea, should be taken out of the sphere of his operations. The trade left to itself would soon fall into its natural channels.

The

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries.

The mercantile community of India, though depressed formerly by the existence of the Company's monopoly, is now quite adequate to any operations required for remittance to Europe. The danger of combination against the Company is purely chimerical. There would soon be a commercial community, branching either from India or Europe, or both, in China, Singapore, &c., adequate to bring home the teas, and to manage the home trade as it now does the large Indian country trade.

Mr. Rickards.

The Company's interference in the buying market in India, which never fails to produce a very injurious and *unnatural* rise of prices, destructive of the natural order and principles of trade. I have explained in evidence* that this rise of prices is of no consequence to the Company, who trade on a capital supplied annually from the revenues, and to whom profit is therefore no consideration; but ruinous to private merchants, to whom profit is every thing. The commercial transactions of individuals are most materially injured by this interference; and the injury will infallibly continue *as long as the Company are allowed to supply themselves in India with funds or investments, either for the Home or the China market.*

It has been proved by several witnesses in the late examinations, and the fact is indubitable, that whenever the Company's commercial agents appear in the Indian market as buyers, the price of the commodity in demand is immediately raised ten, twenty, thirty, or forty per cent. It is raised, in fact, above its *natural* price; the legitimate operations of commerce are disturbed; the prime cost and charges exceeding the sale proceeds, private merchants are seriously injured, sometimes ruined; the means of remittance between India and England greatly obstructed; and the commercial intercourse of the two countries thereby cramped within narrow limits, which might otherwise be incalculably extended. This is a serious national evil, which *nothing but the entire abolition of the Company's trade can effectually remedy.*

But the Company's advocates, never at a loss for specious argument, dwell with peculiar complacency on the Company's "*large capital*;" of their just right to turn it to the best account, by entering the general market on the same footing as private traders; and that the latter have no good reason to complain of the Company's competition, merely because *the largeness of their capital* may give them advantages over the holders of smaller funds. A large capital, it may be observed, is no objection in any country or market, but the reverse, provided it be subject, as other capitals are, to the natural laws and chances of trade, without which there can be no fair or legitimate competition. But besides the glaring absurdity and injustice, as a general principle, of a sovereign trading in his own dominions, the mischief in this case is not from the Company's competition as large capitalists, but from their entering the market without any real trading capital at all. If there be any truth in the official accounts submitted to Parliament, this one fact is as clear as day, that ever since the year 1765, the Company's trade has been wholly supported and carried on by large sums annually supplied from the revenues of India. Being thus furnished from year to year with artificial means of support, their trade is prosecuted with a reckless indifference as to profit or loss. The Company, for example, have no occasion to care for actual loss to the extent of 10, 20, or 30 per cent. on any annual adventure, being assured in the next year of their one or two millions from the revenues of India, just as if no such loss had occurred. The Company may therefore prosecute trade under a series of losses from year to year, which would soon reduce legitimate merchants to bankruptcy. They have not the same cause to be scrupulous about the prime cost of goods, as private merchants have, to whom profit on the returns is of vital importance. Under such circumstances, to hold out the East-India Company as fair competitors,

* Vide Evidence, 22d March 1830, Answers 3488, 3511. Also 3d March 1831, Answer 1146, et seq. And 21st April 1831, Answer 2508, et seq.

competitors, is mere delusion. It is, on the contrary, obvious, that if the surplus revenue and loans of India were but sufficiently productive, the Company, in their present united character, would possess the means of effectually crushing the private trade.

The inconveniences and disadvantages to the private traders from bringing the revenue of the State, to which profit or loss must be matter of comparative indifference, into competition with their capital, must be so obvious that I need hardly dwell upon them. It is only necessary to look at the account furnished by the Company, to see the capricious manner in which the public funds are likely to be applied to such a purpose. In the first year of the Company's speculations, the sum invested in indigo was about £26,000. Next year it was more than treble this amount. In the succeeding year, this last amount itself was more than trebled. In the following year the amount invested fell off by 30 per cent. In the following it rose to be higher than ever. In 1827-28, the amount invested was £716,000. Next year it was less than half this sum; and in the last year of the statement the investment was nearly doubled again. While no power can increase the demand, the violent and injurious fluctuation in trade, which must be the consequence of the public revenue being employed one year in the purchase only of the twentieth part of the staple produce of a country, in another of a fifth part, and in a third of a tenth part, as has been the case in the Company's purchases of indigo, may readily be imagined. Indeed, the account exhibited by the Company shows the enormous amount of the fluctuations which have taken place, and which, I believe, are unprecedented in any commodity of the same description. In the first year of the Company's speculations, the price per maund paid was but sicca rupees 157. Next year it was 50 per cent. more, and in the third year very nearly 100 per cent. more. In the last year the price was near 40 per cent. less than in the third year.

The silk trade is of a far more objectionable character, in so far as the state is more directly implicated in all the operations connected with its management.

Mr. Crawford

QUERY VII.—In what Modes, and upon what Terms, have Remittances been effected between England and India, or India and England, and between the principal places of Commerce in India and Asia with each other; and to what extent, and with what degree of regularity are the operations of Foreign Exchange and Remittance conducted by European Native Merchants, as a distinct or separate business?

Answer.—PRESUMING that the question refers to the mode and terms by which the Company have effected remittances from India, I have to state that they have effected remittances,

Mr Lloyd.

- 1st. By direct consignments of merchandize to England.
- 2d. By consignments of bullion.
- 3d. By bills of exchange remitted by the Indian Governments.
- 4th. By bills drawn upon the Indian Governments.
- 5th. By supplies furnished the Canton treasury.
- 6th. By repayment of advances made in India to the King's Government.

As the proceeds of these several modes of remittance are realized at various periods, some short and others more protracted, the rates necessarily contain a compensation, in the

the nature of interest, for the period between the advance and the realization of the money.

A remittance by consignment of merchandize is realized at a more protracted period than by a bill of exchange at twelve months date; and the proceeds of a bill of exchange, drawn from England upon India, are realized at a shorter period than a bill drawn from India upon England; whereas the proceeds of a remittance through China are realized at a still more protracted period than by the other modes.

The rates thus adjusted are as follow :—

Upon all the Company's Transactions from 1814-15 to 1830-31.

		Per Sicca Rupee.	
		s.	d.
By sales of consignments of merchandize to England direct from India	...	2	1 76
By consignments of bullion direct from India in the years 1821-22, 1823-24, 1827-28, 1829-30	... ..	1	10 46
By consignments of bullion from China, paid for by drafts of the supracargoes upon Calcutta, in 1829-30 and 1830-31	... ..	1	10 93
By bills of exchange remitted by the Indian Governments in 1829-30 and 1830-31	... ..	1	9 90
By bills of exchange drawn upon the Indian Governments in 1830-31	...	1	9 31
By supplies furnished the Canton treasury for the provision of the tea investment	... ..	3	4 21
By repayment of advances made in India to the King's Government	...	2	1 65
As respects the Territorial branch, separately considered, the commerce pays for each rupee	... ..	2	3 84

From an inspection of the above rates, the advantage or disadvantage of each mode of remittance may be gathered.

Mr. Hill

I understand this inquiry to embrace the whole commercial and pecuniary dealings between the countries to which it refers; and I answer, that remittances, in that large sense, have ordinarily been effected in the course of trade, and that the terms on which they have been effected have, in each instance, depended upon the out-turn of the mercantile adventure. The balance remaining due has been settled by a remittance, in the limited and usual sense of the expression, that is, by a payment in bullion, and the terms have been the intrinsic value of the remittance less the charges incurred in making it. The Government of India, combining a commercial with a political capacity, has in the same manner effected its ordinary remittances by means of trade, and occasionally, when those means did not answer, has effected them by sending bullion, and more rarely by purchasing bills from private merchants. Its remittances by means of trade, I believe have, on an average, proved much more profitable than the out-turn of bullion remittances: those by private bills less so. As the course of trade leaves due a large balance from China to India for opium, cotton, &c. and a large balance from England to China for teas, there is obvious advantage in this channel for the remittance of the funds required by the Government of India for its large payments in England. The remittances of those funds completes the circuit of the transactions between the three countries.

Glasgow Chamber
of Commerce

Remittances to India from Great Britain are generally made by bills of exchange. From India to Great Britain by bills of exchange, produce, bullion, or specie; the rate of exchange, Calcutta upon England, has been very steady for several years past, being from 1s. 10d. to 1s. 11d. per sicca rupee for bills at six months sight; London on Calcutta, 1s. 8d. to 1s. 9d. per sicca rupee; from Calcutta and Bombay to China the balance of trade

is always greatly against China, which has consequently to make large remittances to India in bullion and specie. The extent of business in exchanges betwixt Calcutta, Bombay, and England, is very considerable, and is conducted with the utmost regularity; but we are not aware that it has yet become a distinct or separate business of any European house.

Remittances have been and are now made on account of private merchants, either, as the case may be, by bills on India or on England, with the greatest facility and regularity; and we learn from the best authorities that remittances are effected in the same manner, to great extent and with perfect regularity, between the principal places of commerce in India, both by Native and European agents.

Liverpool East-
India Committee

Remittances between England and India, and India and England, are regularly effected by means of bills of exchange, and of specie. As there is a larger amount requiring remittance from India to Great Britain than from Great Britain to India, few bills, comparatively, are drawn in Great Britain on India, but there is a constant exchange on London in Calcutta and other commercial towns of the East. This exchange fluctuates according to circumstances, within the customary limits imposed on the exchange operations of all countries, viz. the cost of the transmission of the precious metals. Specie is frequently transmitted to and from India, in consequence of which, undue fluctuations in exchange are checked and corrected. With the exchanges between the principal places of commerce in India and Asia the members of this Board are not minutely acquainted, but exchange operations do exist between such places, and are conducted both by Native and European merchants, but banking is pursued more as a branch of general business than as a separate trade.

Manchester Cham-
ber of Commerce,
and East-India
Committee

Previously to the renewal of the present Charter, and indeed for some years after it, bullion formed a considerable portion of the remittances to India; but when the exchange on London to Calcutta fell below 2s. 3d., the quantity very much decreased. In India the case is reversed, and bullion has lately been in the course of extensive shipment, and will continue so no doubt as long as the exchange is scarcely at a bullion level. The only check to exports of bullion from Calcutta will be an improvement in the quality and a reduction in the cost of its raw produce, with diminished duties here. From most parts of Asia returns to Calcutta are mainly in bullion. Bills from China to a large amount sometimes come. Government bills too are frequently drawn at Bombay on Calcutta, remitted for the purchase of opium; and the Bengal Government have also purchased private bills in Calcutta on Bombay. I think we sold about £20,000 just before I left India. The operations of foreign remittances and exchange are not conducted as a distinct and separate business, but the internal exchanges are almost entirely managed by native shroffs as an exclusive business.

Mr Bracken

The Government advertises for the purchase of bills drawn against consignments. Such consignments are sent to the Company's warehouses for inspection, and if the quality be approved of, and the estimated value, cash to the extent of two-thirds thereof is advanced on the bills, which with the bill of lading are sent to the Court of Directors. On the consignees satisfying the Directors of the due payment of the bills, the goods are handed over to them. The goods are in all cases required to be landed in the East-India Docks.

The Government remittances between the ports and Presidencies have been effected by bills in general; and when bills could not be negotiated at the Presidencies, requiring supplies from Bengal on equal or more favourable terms than the Government could

Mr. Wood

effect a cash remittance, the cash has been remitted. The same system has been pursued with China, but cash has seldom been forwarded; and I only recollect one instance and on that occasion the remittance was sent back without being landed. The remittances required in England have been effected principally through the Honourable Company's trade, direct and indirect, through China, and occasionally by cash remittances, when the Calcutta sicca rupee, after paying freight and insurance, has yielded 1s. 10½d. I am unable to state, from my own information, what the out-turn of the Honourable Company's mercantile transactions have been, and what the rupee has yielded, but a reference to the accounts of the India House will show.

Mr Crawford

The Calcutta sicca rupee, which contains 175·9 grains of pure silver, is equal intrinsically to 26·15d., and is reckoned in sterling money at 24·056. In exchange it used ordinarily to be reckoned at half-a-crown, or 2s. 6d. This rate seems to have been early assumed in converting the British pay of the troops into Indian money. Thus, a captain's pay of 10s. per diem was estimated, and continues still to be estimated, at four sonat rupees, although the latter, a money of account only, be four and a-half per cent. less valuable than the sicca rupee. During the existence of the monopoly, the Company was the sole, or at least the great and principal remitter, and I know no other way of accounting for the exchange being continued at 2s. 6d., or above it, except its having been so arbitrarily fixed by the principal remitter. When the currency of this country became depreciated, the nominal rate of exchange rose, and I have myself received, from houses of the first credit in Calcutta, bills at the rate of 2s. 9d. per sicca rupee. I have, indeed, been told of its having been as high as 2s. 10½d. This happened when the depreciation of the English currency was at the highest, or from 1812 to 1816. I have at the same period received five guineas per ounce of standard gold remitted in bullion, and if it were worth while, could produce the account sales. The exchange continued after the opening of the trade, down to 1819, at from 2s. 6d. to 2s. 7½d.; and in 1821, as the currency of Great Britain was righted to its just standard, it fell to 2s., beyond which it has not since risen.

If the import trade of the East-India Company into India be objectionable, and its abandonment seems to admit the fact, the export trade appears to be liable to equal, and indeed to weightier objections. In this, however, the Company still perseveres, confining the commodities it deals in at present to indigo, raw silk, a few silk piece-goods, and saltpetre. The indigo is purchased in the open market at Calcutta, and, considered as a mere commercial transaction, is so far quite unobjectionable. An account exhibited by the Company shows the result of their speculations in indigo for ten years, ending with 1829-30. According to this statement, the remittance made on the whole period gave a return of 1s. 11½d. *nearly* for the sicca rupee. For the first seven years, the account exhibits a profit of £349,040, and for the last three years a loss amounting to £291,455, making the net gain on ten years transactions only £57,585, or little more than one and a-half per cent., which I think can hardly come under the denomination of a mercantile profit. The account, however, exhibits internal evidence of being nothing beyond a mere estimate. The invoice price does not include a share of the general charges of the commercial establishment, nor warehousing charges in India, nor interest from the period when the advances are made from the territorial treasury, until the shipment of the indigo: and the charges in England, taken at the round sum of five per cent., are avowedly an estimate, and can hardly be supposed to cover a due share of the heavy commercial establishments at the India House, amounting, according to a recent document, exclusive of the rent of the India House and warehouses, to above half a million per annum. The Indian charges on the whole period amount to no more than two and a quarter per cent. Now the private rate of commission, including brokerage, at Calcutta, is three per cent., and to this must be added packing, portage and conveyance to the Company's ships by a river navigation of 100 miles. The Company's charges

charges are represented, therefore, as being probably little less than one-half of those of private merchants. The fallacy of this statement is easily proved. The fixed commercial offices and establishments of the Company in Bengal in 1826-27, amounted to sicca rupees 9,35,178,* and the total exports and imports, exclusive of military and naval stores and bullion, was sicca rupees 1,70,68,953. Here alone, then, excluding all minor ones, we have a charge of nearly five and a-half per cent., or double the amount given in the statement. According to the Company's statement, the advantage gained by remitting in indigo instead of bills, has amounted to no more than 392 decimals of a penny per rupee; but even this very inconsiderable one, I presume, would disappear if an actual account were drawn out exhibiting the items which I have suggested.

Of the remittance effected through the medium of raw silk, the Company has rendered an account for the last sixteen years, ending with 1829-30, showing a profit of £1,027,636 on eleven years, and a loss of £223,980 in five years, which gives a total profit on the sixteen years' operations, on a capital of £11,198,770, of about 7·1 per cent. The account is more unsatisfactory and imperfect than that rendered of the indigo investment. The charges down to the arrival of the silk in Calcutta are mixed up with the cost, so as not to be distinguished, and whether the rent of silk filatures, interest from the period when the money is borrowed from the territorial treasury until the shipment of the article at Calcutta, be added, or allowances be made for bad and irrecoverable debts, cannot possibly be ascertained. The rate of freight charged on silk is the same, or rather more than on indigo for the ten corresponding years of the two statements, although in private freights the latter be estimated at forty per cent. more than the former, on account of its greater bulk; a proof that this part of the statement is certainly an estimate. The same round sum of five per cent. for all the London charges is made on silk as on indigo, although it be a commodity of double the price for the same weight. If an actual account of the silk investments of the Company had been given instead of an estimate, I am convinced that, instead of a profit of seven and a-half per cent., a considerable loss would have been exhibited, most probably, indeed, a very large one.

In reply to the query respecting the mode of conducting foreign exchanges and remittances among the English, the business of merchant, agent, and banker are not conducted separately; neither, I believe, is this in general strictly the case with natives, although, among the higher classes of Hindoo bankers, the separation is more complete. Bills of exchange have been known to the people of India for many ages; and as their name *Hogndee*, or more correctly *Hindi*, implies, were introduced into Lower Bengal by the *Mahomedans*. In all the principal commercial towns of Bengal these native bills of exchange are easily obtained upon any other considerable place, and in a few towns, even upon places beyond the limits of India. Bills drawn at Benares on Calcutta, at twenty days' date, may generally be discounted at one per cent., which I understand to be the same rate at which the bills of European merchants or agents are discounted. Formerly the native bankers had private posts or expresses, but at present avail themselves of the conveyance of the general post. At Calcutta, bills may be obtained from European houses of business on London, Liverpool, Canton, Bordeaux, New York, &c., and the exchanges on London, Madras, and Bombay are regularly quoted in the price-currents. At Canton, bills of exchange are drawn on London, Calcutta, and Bombay, and the rates are regularly quoted in the printed price-currents of that place. The same is the case at all the European settlements in the Eastern Islands. In the latter, except Java, where the Dutch have introduced the *guilder*, the Spanish dollar, divided into a hundred parts, is the universal, cheap, and very convenient currency. This extends even to Canton so far as concerns foreign commerce, all articles of trade being there quoted in the Spanish dollar, with the exception of the two great staples, raw silk and tea, and occasionally of cotton wool. The rate of exchange between Canton, the Eastern Islands, and Calcutta, was formerly fixed by

* Return of all Commercial Offices and Establishments under the Presidency of Bengal.—Report of 1831, p. 672.
—Wilson's Review of the External Commerce of Bengal, Tables, p. 16.

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continued.

Trade with India.
Answers to Queries.

by the Company at the rate of sicca rupees 209 for 100 Spanish dollars. The par, looking to the quantity of pure silver in the Calcutta sicca rupee and Spanish dollar respectively, is 210·8 per 100 dollars. The exchange, when left to regulate itself, has fluctuated, taking Canton for the example, at from sicca rupees 200 to sicca rupees 205 for bills drawn at thirty days' sight. It is to be recollected that there is a charge at Calcutta of two per cent. for the coinage of standard silver, and an additional one of from one-fourth to two and a-half per cent., if it be not standard.

Mr Mackillop.

To a question so general, I may remark, that remittances from India to England, and *vice versa*, are conducted on the principles that regulate the exchanges in the transactions of all other parts of the world; but there is no class of men in India, that I am aware of, who confine themselves exclusively to this branch of business; unless it be some of the old shroff establishments (native bankers), who formerly had extensive business in bill transactions, confined, however, entirely to the interior of India, but which is now greatly diminished by the facilities afforded by the public treasuries in different parts of the provinces drawing on each other.

Mr. Mackenzie

I have not the means of answering this question with precision. The officers of account at the India House can readily, I imagine, show the result of all transactions between England and India, as well as the rate at which supplies have been furnished to and from China, and the financial records of the Government will explain how they have been transmitted between other quarters. I can venture only upon a few general remarks: 1st, as to the supplies from England to India; I am not aware that during the period under review, any goods have been sent to India with the view simply of remitting funds there; and the Company's import trade in that country being now altogether inconsiderable, it can scarce be worth while to discuss whether, and how, it should be carried on.

The remittances from India to England have been made chiefly in goods, with occasional consignments of bullion, and a very small amount of bills on private merchants.

I presume the Company have well considered the expediency of excluding from their ships the main article of traffic between China and India, *opium*. Remittances between other parts of Asia are always made in bullion or by bills, chiefly by the sale of bills; and though much is left to the discretion of the several officers in charge of treasuries, and I am far from supposing that the management has always been good, it does not strike me that any other course can be pursued. Local circumstances do not, I apprehend, admit of that free competition which would be our best guarantee against loss by exchange. I can only, therefore, suggest that the provoking embarrassment which arises out of our continuing to have four currencies, may be removed as speedily as possible.

Mr Rickards

The whole business of remittance and exchange between the different countries of India, and between India and foreign parts, is as regularly conducted in that country, and on the same principles, as between any or all of the commercial states of Europe; the remittances required by the Company for necessary political payments in England may therefore be as securely effected, and more to their own advantage, as well as that of the public, through the medium of private agency or dealers, than in the method now adopted.

QUERY VIII.—WHETHER, and by what means, the Funds required for Territorial purposes in England could be regularly supplied, and the Government effectually secured from Loss by bad Bills, were the Executive Authority in India to cease to carry on Trade; and at what rate it is to be expected that such Remittances could be realized?

Answer.—OTHER countries besides India have to make large annual remittances to Great Britain for interest on their public stocks, which is accomplished without their respective governments putting on the character of merchants, and consequently through the instrumentality of private commerce. The sum annually required by the Court of Directors in England from India must of course be paid over to them through the medium of bills of exchange, which may either be drawn by the Company in London on their Treasury in Calcutta, and sold on the public exchange, like other bills of exchange, for the best obtainable price, or the Government in Calcutta may there, in like manner, buy and remit mercantile bills on London. There might occasionally appear to be considerable loss to the Company by such exchange operations: but this loss would be apparent rather than real, for the Company would probably obtain a higher average rate of exchange on these bill transactions than they have been accustomed to realize by their remittances in merchandize. The only difficulty that exists in the case is in the extent of the amount so required to be remitted. By making the change of system gradual, this would be overcome, and the change might probably be facilitated by making an alteration in the Company's system of payments, whereby a part of the sums now paid in this country might be transferred for payment to India; and it may be worth consideration, whether the 2½ per cent. import duty now payable in India on imports from this country, might not be levied here at the time of shipment, without producing much inconvenience.

In reply to the inquiry, "by what means the Government could be effectually secured from loss by bad bills," we candidly own that we know of none. As regards drafts on India, issued in London, there could be no risk to the Company, and with respect to mercantile drafts on England, purchased in India, the Company must be content to take that degree of risk which is borne by merchants, and which, from the nature of things, is incidental to such operations; but the same caution and foresight which govern the conduct of the private merchant will equally protect the corporate body; and they need not subject themselves to the danger of a greater rate of loss than falls on the private merchant. This risk, like others dependent on mercantile operations, resolves itself into a moderate average loss, and must necessarily be less mischievous and embarrassing in the operations of a great Company, possessed of unbounded credit, than to the private merchant. The inquiry would almost seem to imply, that the Company are supposed now to get home their remittances free from any risk of loss; but if a fair calculation be made of the cost and proceeds of their different mercantile investments for remittance (always excepting their unjust monopoly of the tea trade), it would probably be found that their losses on these investments considerably exceed any they would be likely to sustain on bills.

The inquiry, at what rate it is to be expected that, under other arrangements, their remittances could be realized, scarcely admits of a positive answer. This Board sees no circumstances in the transfer of mercantile business from the Company to private merchants which ought permanently or seriously to affect the rates of exchange. If the same quantity of commodities continue to be transmitted from India to Great Britain, and from Great Britain to India, the average rate of exchange might be expected to remain the same.

Losing markets check shipments; gaining markets encourage them; and the exchange will, as usual, vibrate in one direction or the other, according as one or other of these two states prevails; but these vibrations have their natural limits, and there always exists a strong tendency to an equilibrium.

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Manchester Chamber of Commerce and East-India Committee

APPENDIX,
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continued

Trade with India
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Glasgow Chamber
of Commerce

Were the executive authority in India to cease to carry on trade, we have no doubt the funds required for territorial purposes in England might be regularly supplied, and the Government effectually secured from loss by bad bills. The simplest and safest mode of obtaining such funds would undoubtedly be, by opening the Indian Government treasury in England for money against drafts on the Indian Presidencies. On the other hand, the Government in India might remit from thence the bills of private merchants of undoubted solidity, at short dates; and, if thought necessary, the bills of lading for the produce against which such drafts might be drawn, could be lodged in the hands of the Government till such bills were accepted in this country; besides which, the Government in India might occasionally find it advisable to remit from thence in bullion or specie, which of course it would be their duty to do whenever such a mode would yield a more favourable exchange than could be procured from private merchants, and which must always be regulated by the price of bullion; it must be obvious, however, that were the Company's trade entirely to cease, private bills would be more plentiful, and the character of mercantile transactions with India would be still more secure.

A very favourable means of making remittances through China from India to Great Britain will be one of the benefits attending the opening of the trade from this country to China.

Liverpool East
India Committee

We have already stated our belief, in answer to Query VI., that remittances might be made to England to the full extent of the Company's wants, by various means, were they to cease to carry on trade.

They might open their treasury in Leadenhall-street for money against bills on the Indian Governments; they might at the same time make remittances in bullion or specie, as favourable opportunities of doing so occurred, from India to this country; occasionally, too, undoubted bills might be purchased (or as is practised by the Government of the United States in remitting the interest of loans payable in Europe, advertise for such bills with two unexceptionable indorsements), but we would particularly press upon the attention of the Board the mode of remittance by respondentia, as being one which is free from many of the objections that apply to other private securities, and which is at present practised by merchants to great extent in effecting remittances between India and China.

Mr Hill.

This inquiry embraces two points, viz. 1st. The existence of the funds required for territorial purposes in England; 2d. The command of those funds. As far as commercial intercourse between England and India is concerned, I do not conceive that the existence of such funds would be materially affected by the Indian Government ceasing to carry on trade. The trade which they now carry on would, as far as it might be profitable, be taken up by private merchants when they left it off. I think too that the command of those funds would still be within the reach of Government, even after they ceased to trade, although they could not expect to obtain them on better terms than those of a bullion remittance, which would be less favourable than the out-turn of their mercantile adventures, or than the rate established by the Board of Control.

If the Indian Government should cease to trade between India and China, and between China and England, there would unquestionably be a hazard that the funds required for territorial purposes in England might cease to exist, or cease to be readily available for that purpose. In my reply to the sixth head of inquiry, I have explained the mode in which those funds are obtained under the present system. After the abandonment of that system, by Government ceasing to trade, the supply of tea from China might be interrupted, which would cut off the supply of the requisite funds in England; and if that interruption occurred for a season or two, or were repeated several times, it seems probable

probable that the national taste for tea in England would change, and would never return. That risk is guarded against at present by the stock of tea required by law to be kept on hand. It is expected by the advocates for opening the trade to China, that the measure might greatly increase the demand for English manufactures. Were that effect to follow, it would proportionally reduce the funds made available by the China trade for the territorial purposes of the Indian Government in England.

Assuming that the China trade were not liable to interruption on the new system, and that it still brought available funds to England on the same scale as the present system, the Indian Government would be exposed to the hazard both of loss and of litigation in obtaining the command of those funds by means of private bills. Experience alone can determine the amount of that hazard, or of the expense at which it might be guarded against. The Government would also be liable to have the hardest terms imposed upon them which the circumstances of the case would permit, and could never expect them to be more favourable than the out-turn of a bullion remittance.

The remittance constantly required from India to England on the Government account is a disbursement for which India receives no return, and may be regarded in the light of a national tribute. To that remittance have to be added the funds required for the use of private individuals, for which, in the same manner, no return is made to India. The total amount of this tribute is so large that the payment of it requires to be facilitated as much as possible, both by fostering the resources of India, and by promoting a demand for her products on the part of other countries. If this great duty be not attended to in both its parts, India may come to be unable to satisfy the exactions of England. Whatever augments the surplus produce of the country will enable it the better to bear the burden we have laid upon it.

The transmission of property between India and England is of a twofold character: the interchange of commodities in trade, and the remittance to England by the Government of India of a tribute, or what is equivalent to a tribute, viz. that part of the salaries of public functionaries which is sent to England; the retiring pensions of those who have no longer any functions to perform, and the interest on the debt: no return being made to India for these.

Mr. Laugton

Individual merchants, who know well that their interests will suffer from an injudicious selection of the commodities they export, as well as from incautious expenditure in the conduct of their operations, will be more quick-sighted and economical than the officers of Government, or a Board of Trade can be expected to be, who have not the slightest interest in the eventual proceeds of such shipments. Executive governments will therefore rarely, if ever, gain in an open trade, in competition with private individuals, though the latter may be occasionally ruined by the fluctuations caused by the large scale of operations of the former. Since the trade with India has been thrown open, the East-India Company have experienced how little able they are to compete with the private merchant, and have nearly abandoned the field to him; but the Indian Government still continues to ship merchandize in reimbursement of the territorial charges paid in England; and the Company have held out that it is the best, and indeed the only practicable way of effecting that reimbursement; but it may be assumed, and I think without fear of contradiction, that private merchants now import from India, in addition to the merchandize shipped by the Government, all the products of that country for which a market can be found in Europe, at prices that will repay the cost of production and transport, and give a very moderate profit to the importer; and that, were the Government to cease to ship merchandize, that merchandize, or a superior selection, would also be imported by the private merchant.

It would, therefore, be wiser in the Indian Government to follow the example of the Company in abandoning trade; and, instead of merchandize, to transmit the tribute in bullion.

bullion, which it could do on equal terms with the merchant. But it would be still better to reimburse England for her outlay through the medium of bills of exchange, either drawn in London on the Indian treasury, or bought at the Presidencies from the merchants,* to whom, in the rate of exchange, a small profit would be included for transmitting the bullion. Whatever articles of merchandize, in addition to those interchanged in the course of trade, admitted of being sent to Europe with greater advantage than bullion, the merchants would not fail to discover, and no more coin would be sent out of the country than was necessary to cover the balance.

As to the loss by such remittances, instead of making the reimbursement in current rupees at the Board rates, it might amount perhaps to near twenty per cent. But the loss is ideal, and its amount immaterial; since, if the territory now pays in India only ten current rupees in reimbursement of the pound expended in England, which ten rupees when remitted or consigned to England yield only net 16s., the territory will appear to have saved, and the commerce to have lost, 4s.; but 4s. less in surplus profit will have to be applied in liquidation of Indian debt. Were the surplus profits to cease altogether, either from a change of system or from misfortunes in the Company's trade, the Board rates could not be sustained a day, and the actual rates of exchange must be at once resorted to.

The loss by remitting bills instead of bullion would be merely the small profit alluded to, as, whenever the difference between the rate of exchange and intrinsic par exceeded materially the cost of transmitting bullion, the bullion itself would be sent.

If this view of the subject be correct, the same reasoning will apply, whatever may be the amount to be remitted from India; but it is impossible not to feel the wish that an operation so prejudicial to the welfare of India, and to the increase of trade with that country, may be rather diminished in extent than increased.

Mr Mackillop.

If the East-India Company ceased to export goods from India, their place would be supplied by private merchants; and I can have no doubt Indian produce would be imported to the full extent the markets of Europe would take off, with the prospect of moderate benefit to those engaged in the trade. It follows that, under this system, means would be afforded of effecting remittance of part of the sum that the Company must yearly bring from India for the payment of their home disbursements; and the mode of effecting that object would be by the Government of the Presidencies of India purchasing the bills of exchange on England of the shippers of goods, the bills so drawn to be collaterally secured by the bill of lading, and policies of insurance for the goods shipped, the amount of the bills of exchange in each case to have reference to the value of the goods, in order to guard against loss by the fall of markets. In this manner, doubtless, remittances could be annually effected, but their extent must necessarily depend on the encouragement afforded by the state of the European markets; for private merchants would be guided by the cost of goods in India, and the probable result of their sale in Europe, profit by shipments being their only object. It is therefore impossible for me to say "to what extent" these remittances would be made annually, because that must depend, as already observed, on the state of markets.

I have already observed that the manufacture of silk is chiefly in the hands of the Company. Supposing them to cease to be interested in that branch of business, I am not prepared to say that individuals would immediately embark in it to the same extent. There would in that case probably be a diminution in the supply of this article, and also a falling off in quality, at all events for some time. Certain it is that no Europeans have hitherto engaged extensively in this business, though attempts have been made, and which, I presume, were not attended with success.

The

* These bills might be obtained with the security of bills of lading till accepted; and American accepted bills on first London houses to a large amount are frequently in the Calcutta market.

The rate of exchange will fluctuate more or less; but till there be a greatly improved demand for the produce of India, the exchange of bills is not likely to be more advantageous than bullion; say about 1s. 11d. per rupee. The exports from India must increase, or the exports from this country be diminished, to effect a material alteration in the rate of exchange; and, judging by appearances, I think there is greater probability of the exports from this country continuing to increase than those from India exceeding what they now are, unless circumstances shall arise to reduce the supply of cotton from the United States of America, or that other articles can be imported from India which cannot now be so with advantage. I think the East-India Company might remit, in the manner I have suggested, in bills, with little or no risk of loss; but if any risk shall exist, it will be much less, with ordinary caution, than must attach to the importation of goods, as the advance to be made for bills of exchange should not exceed a certain proportion of the value of the goods assigned as security, say two-thirds. Bills drawn in India on England are usually at twelve months' date: and in the arrangement I have proposed, it will be necessary that the consignees of the goods have the power of selling them, though possessing no control over the proceeds till payment of the bills, for which the goods are collateral security.

It will be understood that the foregoing observations have reference only to the trade with India, and chiefly with that of Bengal. The query I have now to notice refers to the trade with China as well as that of Bengal. While I resided at Calcutta I was engaged in the trade of that port with Canton, and since my return to this country I have continued to be so in a less extensive degree; but having never been in China, I am not prepared to afford information derived from local experience as to that country, and I would therefore wish to avoid making any remarks on the subject, did not one of the primary objects of your inquiry appear to be to ascertain the best mode of effecting the remittance of a large sum of money annually of the Indian revenue to this country. It will I think be evident, on giving consideration to its actual condition, that the trade from India does not afford or supply sufficient means for, 1st, the remittance of the proceeds of goods sent annually from England; 2d, the remittance of the private fortunes of individuals, having disbursements at home, or themselves returning to England; and 3d, the amount required at home by the East-India Company. As India does not produce either gold or silver beyond a trifling amount, any system which would have the effect of draining that country of the precious metals, would prove highly disadvantageous to its interests. The only eligible mode, therefore, by which that part of the Indian revenue required for the purposes of the home government, that cannot be remitted direct, is by the course now pursued of making shipments of goods from India, applying the proceeds thereof to the purchase in China of the tea and other goods shipped to England; the value of the annual shipments from China being far greater than the cost of the goods imported into that country from England. Thus it is that the trade with China from Britain and from India seem to be dependent on each other. I have already stated how far I think a change in the Company's trade with India may take place, without injury to the public interests as they now exist; and on this point I ought, perhaps, to express my belief that it is only of late years that individuals would have supplied adequate funds for carrying on that trade, which to a great extent has hitherto been supported by the capital of the Company. As to any change in the system of conducting the trade with China, that is a subject on which I have already said I feel myself less qualified to give an opinion.

APPENDIX,
No. 4.
continued

Trade with India
Answers to Queries
Mr Wood

To answer this question I must be informed of the return of the Honourable Company's trade.

Rs. 30,00,000	Rs. 30,00,000
20	=3,20,00,000
2)6,00,00,000	1s 10½d.
	30,00,000
	=3,00,00,000
116)3,00,00,000(2,58,62,000	2s.
2,32	
680	
580	
1000	
928	

If the Calcutta sicca currency were remitted at 2s., or 1s. 10½d., the difference between the out-turn and 2s. the current rupee would be as follows:

2s. the current rupee, three millions equal	...	...	Rs. 2,58,62,000
2s. the sicca rupee	...	ditto	...
			3,00,00,000
			41,38,000
2s. the current rupee, three millions equal			2,58,62,000
1s. 10½d. the Calcutta sicca rupee, ditto			3,20,00,000
			Rs. 61,38,000

If the remittance were made at the rate of the intrinsic par of the silver currency of England, compared with the Calcutta sicca rupee, it would be at the exchange of 2s. 2½d. vide page 63 of Mr. Wilson's Report; and at this rate

Three millions would equal	...	...	...	Rs. 2,71,69,811
At the rate of 2s. the current rupee, and 116 current rupees the 100 sicca	...	...	...	2,58,62,000
				Rs. 13,07,811

If it were required to remit money from England in aid of the finances, in the event of war, the sum saved in India by the services of the three Presidencies, for purposes of retirement, and the education of children in England, amounting to about one million, would be available, and might be secured by bills at a rate more advantageous than the importation of bullion; and if the natives of India enter more largely into the export trade of their country, it is probable that they would prefer realizing the out-turn of their speculations through the medium of the Government bills than trusting to a return of goods.

So long as there is a surplus in India to meet the demands of the Home Treasury, I am of opinion the surplus may be remitted in bullion, and that it will make no difference whether the surplus receipts are sent home or locked up in the Indian treasuries; and I do not apprehend that any inconvenience would be felt from a scarcity of currency to carry on the retail business of the country: the surplus in this case would be gradually withdrawn from the circulation, and would be replaced by hoarded treasure. Although I am of opinion that it will make no difference whether the treasure is remitted or locked up in the Indian treasuries, I am of opinion that it will make a great difference to the country

country whether the treasure be sent home or laid out in India in the production of goods for the home market. Should there be no Indian surplus to remit to England, it will then be necessary to raise the deficit by loan; and in this event inconvenience may be experienced by suddenly withdrawing too large a portion of the currency from the circulation at the Presidency, where paper money so largely enters into the currency, and would require being converted into specie before it could be made available for a remittance. In this case it would be cheaper to raise the amount required by loan in England on the security of the Indian revenue, and remit the interest, which would become a charge on Indian territory.

I think that the discontinuance of trade by the executive authority would tend to enlarge rather than contract the existing channels of remittance; but it seems to me that the amount of remittance is susceptible of great reduction. I anticipate little or no difficulty in providing a great portion of military and other stores in India.

By the removal of all restrictions on the settlement of the civil and military officers retired from the service, some deduction in the amount of pensions payable in England might follow.

By discontinuing all bills for the interest on Government loans, not already guaranteed by the Company.

By substituting a more economical form of home government, which I conceive may be done without the slightest diminution of efficiency. The people of India may be said to pay at present for three governments.

Sources of supply for home wants would be found by the sale of government bills on India, by bills drawn in India, purchased from the resident mercantile community, or from American and other foreigners bringing letters of credit to Calcutta on houses in London; by bullion, if unfavourable rates of exchange were proposed. In all commercial bills there must be some risk, but there would not be greater there than elsewhere; and I understand in Europe government remittances are constantly effected through such channels. Bullion would always be a resource against any combination of the Calcutta merchants to obtain undue advantages in exchange, if such combinations were probable, which I do not think from the present number of persons engaged in the trade of the two countries, and which may be expected to increase.

I have not taken into consideration remittances *via* Canton, because I doubt the policy of the India government relying on the China trade to provide the means, directly or indirectly, of defraying any part of its territorial expenditure; but so long as the exports from England are less than its imports from China, there would always be a balance available for that purpose. With an equalization even of exports and imports between China and England, the returns for India opium might continue to afford a channel for remittance to London.

The present rate of exchange, drawing on England at twelve months date, is 1s. 10d., at which I received a remittance a few days ago. Drawing on India, I am told that the present exchange is 1s. 8d. to 1s. 8½d. Allowing five per cent. for the twelvemonths' interest, the difference would scarcely be more than one halfpenny, which may be considered to the drawer in England as the price or value of his security in receiving money in hand instead of bills. If the Company, therefore, could draw on India for the whole of the funds required for territorial purposes, there would be entire security and no loss in the operation. The estimated amount, however, namely, £2,685,459,* is at present far

Mr Bracken

Mr Crawford

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries.

far too great to make it practicable to draw on India for the whole, without greatly depreciating the rate of exchange. The most important consideration, therefore, is how the charges payable in England may be reduced. These charges, according to the estimate submitted to Parliament, are the following :

Interest on part of the Territorial debt	£ 875,000
Expense of St. Helena 	90,054
Political charges incurred in England	1,720,405
	<hr/>
TOTAL	£ 2,685,459

The first item may as well be paid in India as in England, if, as I believe is the case, there be nothing contrary to the obligations of public faith in doing so. The second item, considering the object, is so enormous, that it is difficult to believe that it might not be very greatly reduced. The neighbouring island of Ascension, not so easily defended as St. Helena, is maintained by His Majesty's Government for fewer hundreds than St. Helena costs thousands of pounds. Of the third item, the heaviest, no particulars that I am aware of are given in detail in any document laid before Parliament; but in the Appendix to the Report of 1831, page 178, there is an abstract giving the actual charges for 1828-29, and the probable ones for 1834-35, being £1,720,405. The first particular here is "political stores," estimated for the last-named year at £350,000. The Company has given up its export trade as unprofitable, and it is therefore very unlikely that they can send out stores more cheaply than merchandize. The whole, or very nearly the whole of the civil, military, and naval stores might be purchased more cheaply in the market of India than it is possible for the Company to send them out; and such as could not be so purchased, might easily be obtained on contract, payable on delivery. To show that this is practicable, it is only necessary to refer to some of the particulars of these stores, as they are detailed in the account of exports from 1828. For apothecaries' wares, apparel, wrought copper, cordage, glass and earthenware, hardware and cutlery, bar and cast iron, leather and saddlery, machinery and mill work, stationery, musical instruments, &c. alone, the declared value is about £270,000. All these are mere articles of merchandize, and there appears to be no earthly advantage in the Company sending them out on their own account. Connected with the political stores is the political freight, amounting, exclusive of £60,000 per annum for the passage of troops outwards, which might also be paid in India, to £95,000, being 27 per cent. on their prime cost. These two sums being saved, would reduce the sums to be drawn for on India by from £400,000 to half a million per annum; or including payment for "the passage of troops," by a sum exceeding this last. The large sum of £475,405 is the estimate for the "pay to officers on furlough and retirement, and for off-reckonings." Of this amount, the off-reckonings at least might be paid in India, where the clothing of the troops ought to be made up. Indeed, some part of them is, I believe, already so paid. Eventually, and as early as can be done consistently with good faith to vested interests, the whole amount might be so paid. For political charges general, absentee allowance to civil servants and expenses of Tanjore commission, &c., the charges on the treasury of England amount to £400,000. Of the "political charges general" amounting to £350,000, there is no specification whatever in any of the accounts, but I presume they allude exclusively to the offices, establishments, and contingent expenses of the home administration. This immense sum, which greatly exceeds the expenditure of any corresponding department under the administration of the Crown, and which appears to arise to a considerable extent from much supererogatory labour, will no doubt be diminished on a revision of the system, and reduce the necessity of drawing largely on India.

After reducing the charges to be disbursed from the Home treasury to the lowest practicable standard, the obvious course appears to be to draw bills on the Indian treasury to the utmost limit that may be practicable, without depreciating the rate of exchange, and to remit the balance in bills or bullion from India, as may be found most advantageous.

advantageous. The suggestions which I have thrown out would seem to show that the disbursements from the home treasury might be reduced in time to about one-third of their present amount, or at least to a sum not exceeding one million per annum, instead of £2,685,459.

There is no more necessity for the India Company to trade itself for the purpose of buying warlike stores than there is for the Government of Great Britain to do so to buy Russian hemp or Indian saltpetre; contracts with individuals might effect the object.

Payments of pensions, interest of debt, might be placed in England, as in all civilized countries such like operations are performed, by commerce. During the war, subsidies and monies for military purposes were placed all over the Continent through the means of individual agency, and ultimately of commerce.

The jealousy of the Legislature to preserve the monopoly of the home money market to its own government for borrowing, has hitherto prevented the Indian government from contracting for loans in this country; but it cannot now be maintained that such a protection is necessary, when every State in Europe and America borrows in England. Under a different system the India Company might manage their loans so as to reduce their interest to what their high credit would justify. It is certainly desirable to have a portion of the Indian debt held by the natives;* but it is equally expedient to encourage investment of capital in the Indian loans for persons returning to Europe; and which cannot now be done with any satisfaction, as there is no registry in England, and no means of transferring or selling in the home market upon fair terms.

Such a change might lead to a larger sum than heretofore being paid annually in England for interest on loans, but it would encourage capitalists to leave their savings in India, rather than remit them to England; and thus the absolute amount of remittance annually would be diminished.†

Mr Larpet

The

* See in Parl. Papers estimated amount.

† As to the rate at which remittances might be made, that can never vary much from the rupee value in sterling, less charges, except when the remitter trades and takes his chance of the result.

The bullion remittance gives about 1s. 11d. per rupee.

Papers 4 June 1829, No. 285, p. 44.

Cotton.							Dollars.
1825-26	..	..	..	..	..	..	4,275,826
1826-27	..	..	..	..	..	..	5,153,561
1827-28	..	..	..	..	..	..	3,480,083
							3)12,909,470
							Dollars 4,303,156
							Average a' 4½ 860,000 £ sterling.
Opium.							Dollars.
1825-26	..	..	..	..	..	..	9,782,500
1826-27	..	..	..	..	..	..	9,260,826
1827-28	..	..	..	..	..	..	11,243,496
							3,302,955,822
							10,100,000
							Average, 3 years, a' 4½ £ 2,050,000 sterling.
Say, Cotton	..	..	..	..	..	..	£ 860,000
Opium	..	..	..	..	..	..	2,050,000
							£ sterling 2,910,000

Paid

The Company also might safely advance on shipments of private merchants, either from India or China, and no commercial establishment would be required. The goods would be secured in the docks; and to the merchants ultimately interested in the out-turn of the goods the sale of them might safely be left.

India sends opium, say per annum, to China, and raw cotton, and receives back so little, comparatively, that the balance is paid in dollars, of which not less than £1,500,000 are annually sent up to Bengal. But China takes little from Great Britain; and Great Britain requires three millions' worth of tea from China. Thus, by a skilful combination, the tea purchased by the produce of India may be brought into the remittance trade of India, the absurdity of exporting to China to a loss abandoned, and the evils above stated very greatly mitigated.

RESULT of Shipment of Old and New Rupees.

Sicca Rupees per Sir E. Paget.

New Rupees:

5,000 ... lbs. 165 8 0 being at the rate of 7 dwts. 23 grs. each: no loss in weight.
1 5 18 less worse than the standard-2 dwt. per lb.

164 2 2

Sold to the Bank at 60½d. per oz.

lbs. 164. 2. 2. = oz. 1,970. 2. 2. as above, say

£. s. d.
496 12 7

Charges:

	£. s. d.
Melting, 20 s. per 100 lbs.	1 13 0
Assay, 2 s. 6 d. per bar of 6 or 700 oz., the above melted into 3 bars, at 2 s. 6 d.	0 7 0
Cartage and portage, Bank porters, &c. ..	0 9 6
Commission 1 per cent. } 1 ½ per cent.	5 11 6
Brokerage ½ — }	

8 1 0

£ 488 11 7

• Freight	½ per cent.	} Charges in Calcutta as per Invoice.
Insurance	4½ —	
Shipping and Commission	1 —	
Brokerage	½ ..	
————— 6½ per cent.		

Paid by bills drawn by Company's supra-cargoes, 42 lacs, say
Treasure Remitted, 1827-28.

£ 450,000

Bengal imported from China
Bombay

Rupees.
64,18,027
99,17,753
1,63,35,780
say 12. 10d. £ 1,500,000
£ 1,950,000

II.—FINANCE.—COMMERCIAL.

741 II. FINANCE
Commercial

S.Rs.	£.	s.	d.	S.R.	s.	d.
If 5,316 = 488	11	7	...	1	=	1 10
Add, prompt payment						$\frac{1}{2}$

1 10 $\frac{1}{2}$ per bill at 6 months' sight.

5,000 Sicca Rupees, old :

Weighing	...	...	...	...	lbs.	154	9	10
Add,								
12 $\frac{1}{2}$ dwt. per lb. better than standard						8	8	12

163 6 2 = oz. 1,962 2 0

Thus,

The quality of the old compensates nearly for the loss of weight.

New, produce	...	...	...	...	...	oz.	1,970	2	0
Old, —	...	...	...	...	...		1,962	2	0

Difference ... 8 0 0

Say, about $\frac{1}{2}$ per cent. in favour of the New.

	£.	s.	d.
Oz. 1,962. 2. at 60 $\frac{1}{2}$	...	...	...
Less,			
London charges, as above	...	...	...
	£486	11	9

Charges in India per Invoice $6\frac{1}{2}$ per cent

Old.	£.	s.	d.	S.R.	s.	d.
If 5,316, produce	486	11	9	1	will give	1 9 $\frac{1}{2}$
Add 2 $\frac{1}{2}$ per cent. for prompt payment on ls. 10d.						$\frac{1}{2}$
						<u>1 10$\frac{1}{2}$</u>

The only question of importance is, how far the territorial stores have been advantageously supplied, and on this head I should have little doubt of the expediency of having recourse to the market of England rather than trust to that of India, if the business be well managed; if the necessary means be taken to confine the supply to the necessary demand; if no improper favour be shown in the contracts; if the checks be sufficient to prevent abuse, and be applied by persons possessing the requisite knowledge without unnecessary vexation or delay; and if the attention of the local government be kept sufficiently awake to the resources of the local market. There is however great danger, lest incidents for stores on Europe should be passed by the controlling authorities much more carelessly than an equal demand requiring the immediate issue of money; and I fear there has been a want of care on this point productive of considerable waste. So also in supplying a distant government, the revenues of which are to bear the burthen, it is likely that there will be a less powerful sense of responsibility, and less attention to the cheapness and good quality of the articles furnished, than would influence officers immediately superintending the provision of their own departments; and just in proportion

APPENDIX,
No. 4.

continued
Trade with India
Answers to Queries

Mr Mackenzie

portion as circumstances may exclude the motives of personal interest and reputation in favour of the public interests, it may be expected that cumbrous, inefficient, and expensive forms (for every delay, uncertainty, or vexation must be paid for), will be had recourse to. Nor is it favourable to economy on the part of the local government, that they know or believe the increase of their indents to be regarded at home without any very serious criticism. Bullion remittances to India are not likely again to become the subject of consideration, at least for a considerable period; and it would be of little use to inquire, whether, when made, the arrangement was altogether judicious.

The supply of the Indian treasury by the issue of interest bills has not, I think, been very happily arranged. Judging by the light of actual experience, one cannot well deny that the condition attached to the loans was improvidently made, and the rate of the bills issued on payment of the interest of the five per cent. loans should have been sooner reduced, though I should still have thought it proper to give the public creditors resident in England the benefit of a public agency in effecting the remittance of their property at a bullion rate.

The objections on general principles to a government trade are so strong, that I should have been for discontinuing the consignments of merchandize, even though the transaction had been more profitable than it appears to have been. There has been, I conceive, an unreasonable dislike to the remittance of bullion, as if it must not follow the course of trade, and as if there were any other way of bringing round exchanges in the absence of other means affecting prices in India and demand in England. And the plan of purchasing bills in England, or selling bills in India, cannot be said to have had a sufficient trial. My notion in short is, that the remittance to England should be made wholly in bills or bullion, the Company absolutely giving up their Indian trade: that the sale or purchase of bills to the amount required by the Home treasury should become an established part of their financial arrangements, with no other limit than that suggested by the out-turn of bullion; that the local government should have a discretion in taking bills without security, or with any good security which the parties might prefer, in giving up their bills of lading, and that when bills of lading are required, all restrictions as to the docks and warehouses to be used should cease. Remittance to China from England and India, may, I conceive, be made wholly, as they have hitherto been chiefly made, through the means of merchandize, either the Company's, or that of individuals; the proceeds of private consignments being drawn into the Canton treasury by the sale of bills. At least the impression upon my mind is, that in the cases within my recollection, in which a bullion remittance has been required by the Select Committee of Supercargoes, the circumstance may be traced to some want of foresight or defective management, if I may use those terms without implying blame. How far the Company should consign goods to China, is a question on which I cannot venture an opinion without more information, and much more time to use it than I possess. Its solution must of course be greatly affected by any change that may take place in the trade between England and China; but supposing that to remain on its present footing, it may be worth considering, whether part at least of the freight now taken up for voyages to China *via* Bombay, Madras, or Bengal, might not be advantageously obtained by hiring in China private ships that proceed thither from India, with little chance of a full return cargo, and whether funds now provided by the Company's consignment of cotton and sandalwood might not be better raised by bills.

I have little or no doubt that it would be beneficial to the government of India to cease from commerce; and to leave to individual merchants the silk and indigo which the Company now import into England, trusting to bills and bullion for an equivalent remittance. A little time would doubtless be required for the advantageous disposal of their silk concerns, and for the transfer of private capital to supply the place of the Company's advances; but I should not anticipate any serious difficulty on this head, though probably there must be some sacrifice of the nominal value of the Government commercial stock;

and

and I can see no sufficient reason for thinking that the Indian government, when clear of commercial dealings, is, more than any other government, likely to experience embarrassment in remitting the funds required by it in any quarter of the world; the terms of the remittance by bills must depend on the course of trade; it ought never to fall below what a consignment of bullion will yield; and it cannot, I conceive, permanently continue so low. I think it likely that the silk trade would thrive better if the Company had nothing to do with it; and if so, the means of remittance would be proportionably extended. The Government purchases of indigo, though, being confined to Calcutta, they are less objectionable, must, I apprehend, operate in some degree to disorder commercial speculation, and, in the long run, to injure trade and diminish the means of remittance; but the hope of any considerable improvement in remittance from India must rest mainly upon the introduction of new, or the improvement or cheapening of the old, articles of export. Whatever may be the result of agricultural and commercial speculations, such as I now advert to, and howsoever the amount of the tribute payable by India to England may be affected by the arrangements of Government, or by those of individuals, it does not occur to me that the state of the question how funds shall be provided for by the home treasury will be much changed; the chief difficulty, it appears to me, refers not to the mode but to the amount, or rather, I should say, to the sufficiency of the Indian revenues to meet the charges of that country.

If India has really a surplus after paying all its expenses at home and abroad, including of course any loss of remittance which the state of trade may occasion, I should not be afraid of any embarrassment in bringing home the requisite funds; and I should certainly not reckon upon the commercial profit of an Indian investment as a means of supplying any deficiency.

If the question refer to the China trade also, it is much more important, because I apprehend that from such a source a large supply has been drawn in aid of the Indian revenue; and the exclusive privileges to the Company in respect to tea take that article out of the scope of the reasoning applicable to general commerce. By the operations of such privileges, it is clear that a considerable deficit may in future, as in times past, be covered; and other things being assumed as equal, no one can well deny the advantage of having such a resource. But here again we come to the real cause of difficulty, the want of funds, or the apprehension of such a want; and if satisfied that India would have abundant means without support from the China monopoly, we might, I conceive, rest this question of remittance upon the effect, good or bad, which the proposed change is likely to have upon the commerce of the country. If freedom in trade with China shall be beneficial in that respect, I can scarcely imagine that, as far as concerns the mere transfer, and not supply of funds, the discontinuance of the monopoly can injuriously affect the territorial interests of the Government of India. I presume that, in estimating the home demand at three millions, the amount of interest bills has been taken according to the average of past years; but under this head there will be a considerable reduction, also probably some reduction in the supply of stores; and it does not appear to me that much stress can justly be laid on the extraordinary purposes referred to in the last part of the question. It is no doubt true that the payment of the remittable loan may be much facilitated by the command of money in England; but I do not see why, if the measure be clearly an advantageous one for the nation (and if not advantageous it should not be adopted), the necessary funds may not be temporarily raised, without the intervention of the Company. In 1812, under circumstances of the greatest possible pressure upon the national finances, the Parliament sanctioned a loan for a similar purpose; and as the nature of the public debt of India becomes better understood, I can scarcely anticipate any serious difficulty on raising, upon the security of its revenues, a much larger sum than any which the Commercial Treasury is likely to be able to afford. If, indeed, the whole matter of Indian finance shall not be dealt with as a national concern, with all the advantages of the national guarantee, and of that wholesome jealousy of expense which is likely hereafter to prevent the accumulation of debt,

APPENDIX,
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continued.
Trade with India
Answers to Queries

and to prove the best security for the discharge of what has been incurred—nay, on the score of economy, I cannot help thinking that the less the Indian governments are allowed, excepting on special cases and with special sanction, to rest upon aid from England, the better is the chance of solvency abroad—there must always be a danger of their thinking too lightly of that part of their charge which is incurred here, unless compelled on the instant to provide an equivalent from their own treasuries, just as the subordinate governments of India, who had unlimited credit upon Bengal, appear to have thought too little of the cost of measures from the financial effects of which they were relieved. And I should therefore be disposed, even at the risk of some immediate loss, to meet all demands on England, such as the question under reply refers to, by a positive assignment on the general treasury at Calcutta, placed in the hands of individuals or corporations, who had nothing to do with the Government but to make the most of their demand upon it.

I have only now to state generally, that, in order to get bills on the most favourable terms in any condition of trade, every reasonable facility should be given to the merchants selling them; and the purchase of them should be rendered, as far as possible, a fixed part of the financial arrangements of Government, with the restriction merely that a bullion remittance shall be preferred when more profitable. Nothing probably could tend to facilitate bullion remittances so much as having one currency, which, however, seems to imply that the currency of England shall be silver, not gold—a point too important to be discussed here.

To render bullion remittances unnecessary, every effort should be made to promote the export trade of India.

Mr Lloyd.

Under the circumstances herein contemplated, the Government can only be regularly supplied by the usual channels through which a remittance is conveyed from one country to another; that is, either by consignments of bullion, or by bills drawn upon or remitted from India, or by these means combined. The most secure, and at the present time the most productive, is remittance by bullion; this, however, cannot be constantly depended upon to the extent required, inasmuch as the abstraction of the precious metals, adequately to meet the demand of this country, cannot fail to produce great inconvenience in India generally, and more especially with reference to the collection of the revenues. To secure the Government from loss by a bill of exchange remittance, the most effectual mode would be to draw bills upon the Indian governments, and dispose of them in this country; or should money be advanced to individuals in India for their bills on England, the hazard of dishonoured bills will be avoided by the mode adopted by the Company of advancing two-thirds of the value of merchandize to be consigned to them as collateral security for the bills; but this course would involve the question of trading, or the necessity of employing agents, and would be inconsistent with the contemplated course of Indian government assumed in this query, and probably, by encumbering the usual mode of bill transactions, might operate unfavourably on the rate of exchange. With respect to the probable loss, it must be entirely a matter of conjecture; circumstances affecting the state of trade, as well as the political relations of India, will materially affect the question. A bullion remittance may realize in England 1s. 11d. per sicca rupee, and the loss to India on a comparison with the Board's rates would be sicca rupees 54,42,279. India being required to send rupees 3,13,04,348, instead of 2,58,62,069, to pay £3,000,000; assuming the out-turn of bullion, at the intrinsic par of 2s. 0·566d.* there would be a loss of sicca rupees 19,95,547.

As to the question of loss, by obtaining the necessary supply by bills of exchange, whether

* Silver at 5s. 2d. 2s. 0·566d.

whether drawn upon or remitted from India; without insisting particularly upon the consideration of the certain and extended annual demand for bills, and the tendency of such demand to lower the exchange, as it has been assumed that this effect would be counteracted by the discontinuance of trade by the executive authority in India; it is, I apprehend, undeniable, that no individual will take up money for the purpose of trading without prospect of gain by the adventure: the rate of exchange will thus be mainly regulated by the value of the merchandize at the place to which it is consigned. Looking at the produce per rupee, by consignments of merchandize from India, I do not think that the present rate of exchange at Calcutta, say 1s. 11d. per sicca rupee,* can be maintained for bills, under the circumstances of a demand for remittance to the extent of £3,000,000 per annum, unless there be a fall in the cost price of merchandize in India, or an augmented sale price in Europe;† but taking it at that rate, the loss, as compared with the Board's rates, would be sicca rupees 54,42,279; and as compared with the intrinsic par, the loss would be sicca rupees 19,95,547; were bills sold in England the exchange would be still less, probably 1s. 8d. per sicca rupee, and the loss, as compared with the Board's rates, would be sicca rupees 1,01,37,931, and with the intrinsic par, sicca rupees 66,91,199.

In the event of extraordinary circumstances, such as the occurrence of war, the Indian governments would necessarily be straitened in their resources; the regular course of the remittance would, as it appears to me, infallibly be interrupted by the exigency of the moment; many occasions since 1814, of partial suspension of investment, or of extraordinary remittances from England, have occurred when the Commerce was largely in advance to the Territory. With all the advantages hitherto possessed by the East-India Company, of remittance both by India and China investment, a large debt from Territory still remains. As to the occasions of liquidations of India debt, the present constitution of that debt cannot be expected to lead to the same consequences as have formerly occurred; before 1814, increase of the Company's bond-debt, and the assistance of Parliament, were required to discharge bills drawn in liquidation of debt; and so late as 1824, upwards of £3,000,000 in one year was drawn upon the Court for the same purposes, and although directions were given to the Bengal government to remit bullion to the extent of one crore of rupees per annum for two years, to provide for these extraordinary drafts, one crore only was remitted on that occasion, the exigencies of the Indian government preventing a full compliance with the Court's orders.‡

From these considerations the consequence appears inevitable, that even in the event of a regular system of remittance being established, the same measures would not be sufficient to furnish additional funds for extraordinary purposes, and that the reimbursement by India of the sums required by such augmented territorial expenses at home, must of necessity be temporarily suspended.

We cannot entertain any doubt of the practicability of remittances being made from India to this country, with perfect security to the Company, through the medium of private agency or otherwise; and that the system, which has been very disadvantageous to the Company, of forwarding their remittances in produce, is quite unnecessary. The same modes of making remittances to India, as well as between the principal places of commerce in India and Asia, as are practised by private merchants with the greatest facility, security, and regularity, in bullion, in bills, or respondentia bonds, may be pursued by the Company when they cease to be traders.

Hull Committee.

If

* Probably not 1s. 9d. per sicca rupee.

† Bullion remittances are now adopted by private merchants to a great extent.

‡ The total amount of Territorial payments made in that year by the Commercial branch was £5,291,586.

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries

If the East-India Company's trade should be wholly discontinued, and the Court of Directors be empowered, as at present, to administer the political affairs of India, I cannot conceive there will be either risk of disappointment, or difficulty in providing for the remittance from India of such funds as may be required to make territorial payments in England. We have only to reflect on the ordinary operations of trade with all other countries, and the principles of exchange, to be assured of this fact. The Court of Directors assert that their trade in goods is necessary to ensure the requisite remittance of funds. This of course supposes the goods to be in demand in the home market: whence it is clear that, on the Company's trade ceasing, these very goods would be conveyed to England by private merchants; as the bills of exchange between one country and another are always proportioned to the exports and imports thereof, so in this case there would be an additional quantity of private bills in the market, which the governments abroad might buy up. The goods thus drawn against being consigned to the Company, with bills of lading and policies of insurance, the most ample security would thus be given for payment of the said drafts. Another source of supply would be by the Directors opening their treasury in London for bills on their several governments abroad; and a third source, by their being reimbursed in England for the large advances they have constantly to make in India on account of His Majesty's service. From these combined sources, there cannot be a doubt that the means of remittance would never be wanting to meet all the Territorial payments required to be made in England. Of these payments it may be further observed, that the amount will be greatly diminished by causing all payments on account of either principal or interest of Indian debt, to be in future made in India; whilst on the termination of the Company's trade, particularly the China monopoly, it may be confidently predicted that the channels of remittance to England would be so greatly enlarged, as to render disappointment to the Company, under any circumstances, almost, if not quite, impossible.

It has been set forth as an argument for the continuance of the Company's trade in goods, to make sure of remittance, that if their trade were to cease a combination of merchants abroad might be raised to force their bills on the government at a disadvantageous rate of exchange. This appears to me to be the vainest of imaginary fears. The competition among applicants for money on good bills, particularly if the China monopoly were abolished, would be so great as to render it inconceivable that any such combination would ever be attempted; or if it were, government might at once counteract it by a large export of bullion, the mere dread of which, if only threatened, would speedily dissolve any illegal conspiracy of this nature.

The remittance here suggested by private bills, so far from injury, would be a decided advantage to the Company; for no course of events, not even a conspiracy of bill-holders, were it practicable, could possibly reduce the exchange so low as that which has of late years resulted from the Company's consignments of indigo and silk.

But to dissipate the phantom of a conspiracy or combination of merchants to defraud the Company of a fair, that is the real market of remittance to England, let us for a moment reflect on the nature of the export trade of India, and the exchanges dependent thereon. If any such combination could possibly exist, it must be by the supposition, among the principal mercantile houses at the different Presidencies, the object of whose combination would be to lower the exchange, that is, to compel the Company to take their bills on England, say, for the sake of illustration, at 1s. 9d. per sicca rupee, when the course of trade would yield a profit to the merchant at 1s. 11d. or 1s. 11½d. But there are hundreds of others, besides the Company, who annually require a remittance of funds to England, and who would not be satisfied with 1s. 9d. for their rupee. If then the trade between India and England would admit of a remittance at 1s. 11d. per rupee, hundreds and thousands would at once rush into the trade, ready to take up money for unexceptionable bills at this rate, and thus leave the conspirators to the disgrace and loss of utter discomfiture. Before, therefore, any such combination as above apprehended could take effect, impossibilities must be overcome; there must be a union of irreconcilable interests

to accomplish it; a union of parties dispersed all over India, separated by thousands of miles from each other, and as much divided in respect to their several views and pursuits, but who must all be brought to concur, and many by a sacrifice of their own concerns, before the conspiracy could be effected, or before it would be possible to reduce the current rate of exchange below its natural level.

Although 1s. 9d. per sicca rupee is assumed as a suppositive rate of exchange in the preceding paragraph, it must be recollected that, whenever the current rate falls below that point at which it would be profitable to remit in bullion, bullion will then be exported. If the average rate of private remittance is therefore 1s. 11d. per sicca rupee, the exchange will for the most part vibrate a little below or a little above this standard; but if it should perchance fall much below this standard, the governments of India having, by the supposition, in their treasury, in gold mohurs and silver rupees, the amounts which they desire to remit to England, have only to embark the said mohurs and rupees, which, after paying freight and insurance, would yield a remittance of about 1s. 11d. per rupee, and the Company is thus effectually secured against disappointment. It is not, however, recommended that the governments abroad should have recourse to this alternative, except in cases of necessity; unexceptionable bills, on the contrary, should always be preferred, inasmuch as a large annual export of specie from India would, as was fatally experienced in the days of Mr. Verelst and Mr. Hastings, very materially disturb the internal concerns of the country. The amount of the Company's annual remittances to England should also, as above suggested, be confined within as narrow limits as circumstances will admit of, because their remittances, being of the nature of a tribute, would have the same effect as an extraordinary import of commodities into India; in other words, it will occasion an extra demand for bills on London, over and above the *natural* state of debts and credits between the two countries, and by this increase of demand for bills tend to lower the exchange as against India. But this would be a far less injury than is now experienced from the Company trading in goods to "effect large remittances to England, without primary regard to profit."

In reply to the latter part of the question I would observe, that if 1s. 11d. per sicca rupee be the average rate of private remittances, it is a proof that the profits of the trade, combined with the real value of the currencies of the two countries, will not admit of the dealers in bills or consigners of goods granting a higher rate. This, therefore, may be taken as the standard about which remittances, whether on account of the Company or individuals, may or can in future be effected. My own opinion, as above stated, is, that it is a more advantageous rate than the Company could otherwise realize; for if private merchants, with all the economy and vigilance usually practised in the management of their concerns, can only remit at this rate, it is altogether incredible that the Company, whatever statements or estimates may be produced to the contrary, can remit in goods on better terms.

But if the Company, as supposed in the question, should altogether cease to carry on trade, it would then become the wisest policy of the governments abroad, in the exclusive exercise of their sovereignty, to take up bills, when required, at that rate of exchange which the course of trade had established as being best suited to the interests of all concerned, consequently to give every possible facility to the interchange of commodities between the two countries, and to avoid or discountenance those unnatural exports of specie which have of late years been made to England, partly to supply the Company's wants, and partly occasioned by the difficulties in which, as explained in the answer to the fourth query, private merchants are now placed to make saving remittances in goods.

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries.
Mr Larpent

QUERY IX.—WHAT are the present Arrangements with Foreign States in regard to Trade with India, and can any Improvements be suggested in those relations?

Answer.—THE trade of foreign nations with British India is permitted under the 37 Geo. III. c. 117, under certain rules to be framed by the East-India Company, as provided by that and by subsequent Acts.

The latest Regulation of the Company for foreign trade is No. II. of 1830, 26th January, which rescinds the Regulation No. VII. of 1818, and prescribes the mode by which the trade is in future to be carried on, removing the distinction previously existing between foreign European States having settlements in the East-Indies and those that have none; placing all on the same footing, and opening British India equally to the ships of all, whether coming direct from their own countries, or from a port in the East-Indies; also extending the same advantages to the empire of Brazil. The relations with the United States of America are left to be regulated by the Convention between them and Great Britain, dated 3d July 1815.

The duties are levied in Bengal under Regulation No. XV. of 1825, and the only distinction that exists is between imports and exports on a Foreign and British bottom

RATES of DUTY chargeable on Goods imported by Sea into *Calcutta*, or any Port or Place belonging to the Presidency of *Fort William*.

ENUMERATION OF GOODS.				Imported on a British Bottom.	Imported on a Foreign Bottom
1st. Goods the Produce or Manufacture of the United Kingdom :					
1	Bullion and coin	..	..	free	free
2.	Horses	..	..	free	free.
3.	Marine stores	..	..	free	2½ per cent
4	Metals, wrought and unwrought			free	2½ per cent
5	Opium	..	..	24 rs. seer of 80 sa. wt.	48 rs. seer of 80 sa. wt.
6	Precious stones and pearls			free	free.
7	Salt	..	..	3 rs. a md. of 82 sa. wt. per sr.	6 rs. a md. of 82 sa. wt. per sr
8.	Spirituous liquors			10 per cent. ..	20 per cent.
9	Tobacco	..		4 an. a md. of 80 sa. wt. per sr.	8 an. a md. of 80 sa. wt. per seer.
10	Wines	..	..	10 per cent. ..	20 per cent.
11	Woollens	..	..	free	2½ per cent.
Articles not included in the above 11 items				2½ per cent. ..	5 per cent.

ENUMERATION OF GOODS.	Imported on a British Bottom	Imported on a Foreign Bottom.
2d. Goods the Produce of Foreign Europe, or of the United States of America :		
1 Arrack, at a fixed valuation of £30. per cask of 126 gallons	10 per cent. ..	20 per cent
2. Bullion and coin	free	free.
3. Horses	free	free.
4 Opium	24 rs. a seer of 80 sa. wt. per seer.	48 rs. a seer of 80 sa. wt.
5. Precious stones and pearls	free	free.
6 Salt	3 rs. a maund of 82 sa. wt. per seer.	6 rs. a maund of 82 sa. wt. per seer
7 Spirits	10 per cent. ..	20 per cent
8 Tobacco	4 an. a maund of 80 sa. wt. per seer.	8 an. a maund of 80. sa. wt. per seer.
9 Wines	10 per cent. ..	20 per cent
Articles not included in the above nine items ..	5 ditto ..	10 ditto
3d. Goods the Produce or Manufacture of Places other than the United Kingdom, Foreign Europe, or the United States of America :		
1. Allspice	10 per cent. ..	20 per cent
2 Aloe wood	7½ ditto ..	15 ditto
3 Altah	7½ ditto ..	15 ditto.
4 Alum	10 ditto ..	20 ditto.
5. Ambergris	7½ ditto ..	15 ditto.
6 Arrack, Batavia	55 sa. rs. per leaguer.	110 sa. rs per leaguer.
7 Arrack, from foreign territories in Asia	30 sa. rs. per leaguer.	60 sa rs. per leaguer.
8 Arsenic, white, red, or yellow	10 per cent. ..	20 per cent
9. Assafœtida	10 ditto ..	20 ditto
10. Awl root, or morinda	7½ ditto ..	15 ditto.
11. Beads, malas or rosaries	7½ ditto ..	15 ditto.
12 Beetle nut (customs)	7½ ditto ..	15 ditto.
Ditto (town duty)	5 ditto ..	10 ditto
13. Benjamin, or loban	7½ ditto ..	15 ditto.
14. Brandy, from foreign territories in Asia	30 ditto ..	60 ditto
15. Brass, wrought and unwrought	10 ditto ..	20 ditto
16 Brimstone	10 ditto ..	20 ditto
17 Brocades and embroidered goods	7½ ditto ..	15 ditto
18. Buhera, or myrobolan	10 ditto ..	20 ditto.
19. Buckum, or sappan wood	7½ ditto ..	15 ditto

APPENDIX,
No 4.
continued

Trade with India
Answers to Queries

ENUMERATION OF GOODS.						Imported on a British Bottom.	Imported on a Foreign Bottom.
20	Bullion and coin	..	..	..	..	free	free
21	Calizeerah, or nigellah	..	..	..	..	7½ per cent. ..	15 per cent.
22	Camphire	..	..	..	..	10 ditto ..	20 ditto.
23	Canvas, excepting canvas made of sunn or hemp, or other material the growth or manufacture of places subject to the government of the East-India Company, which is exempted from charge of duty on importation by sea	..	..	..	..	5 ditto ..	10 ditto
24	Cardamums	..	..	..	..	7½ ditto ..	15 ditto
25	Carriages and conveyances	..	..	..	..	7½ ditto ..	15 ditto.
26	Cassia	..	..	..	..	10 ditto ..	20 ditto.
27	Chanks	..	..	..	..	7½ ditto ..	15 ditto
28	Cherayta	..	..	..	..	10 ditto ..	20 ditto
29	China goods, or goods from China, not otherwise enumerated in this Table	..	..	..	..	7½ ditto ..	15 ditto
30	Cloves	..	..	..	..	10 ditto ..	20 ditto.
31	Cochineal, or crimdanah	..	..	..	..	7½ ditto ..	15 ditto.
32	Coffee	..	..	..	..	7½ ditto ..	15 ditto
33	Coir, the produce of places not subject to the government of the East-India Company in India	..	..	..	..	5 ditto ..	10 ditto
34	Coin and bullion	..	..	..	..	free	free.
35	Columbo root	..	..	..	..	10 per cent. ..	20 per cent
36	Coosum fool, or safflower	..	..	..	..	7½ ditto ..	15 ditto
37	Copal, or kaliroba	..	..	..	..	10 ditto ..	20 ditto
38	Copper, wrought and unwrought	..	..	..	..	10 ditto ..	20 ditto
39	Coral	..	..	..	..	10 ditto ..	20 ditto
40	Cordage, excepting cordage made of sunn, hemp, or other material the produce of places subject to the government of the East-India Company, which shall be exempt from the charge of duty on importation by sea	..	..	..	..	5 per cent. ..	10 per cent.
41	Crimdanah, or cochineal	..	..	..	..	7½ ditto ..	15 ditto.
42	Dhys' flower	..	..	..	..	7½ ditto ..	15 ditto
43	Elephants' teeth	..	..	..	..	7½ ditto ..	15 ditto
44	Embroidered goods and brocades	..	..	..	..	7½ ditto ..	15 ditto
45	Frankincense, or gundiberoza	..	..	..	..	7½ ditto ..	15 ditto.
46	Galbanum	..	..	..	..	10 ditto ..	20 ditto
47	Galingall	..	..	..	..	7½ ditto ..	15 ditto
48	Ghee (customs)	..	..	..	..	5 ditto ..	10 ditto
	Ditto (town duty)	..	..	..	..	10 ditto ..	20 ditto
49	Gin, from foreign territories in Asia	..	..	..	..	30 ditto ..	60 ditto
50	Goopce muttee, or yellow ochre	..	..	..	..	10 ditto ..	20 ditto.
51	Goomootoo, sunn and hemp	..	..	..	..	free	free

ENUMERATION OF GOODS.	Imported on a British Bottom.	Imported on a Foreign Bottom.
52. Gum arabic	10 per cent. ..	20 per cent.
53. Gundiberoza, or frankincense	7 ½ ditto ..	15 ditto
54. Hemp, sunn, or goomootoo	free	free.
55. Hurrah, or myrobolan	10 per cent. ..	20 per cent.
56. Horses	free	free.
57. Hursinghar flower	7 ½ per cent. ..	15 per cent.
58. Hurtaul, or orpiment, or yellow arsenic	10 ditto ..	20 ditto.
59. Iron, wrought or unwrought	10 ditto ..	20 ditto
60. Ivory	7 ½ ditto ..	15 ditto.
61. Juttamunsee, or spikenard	10 ditto ..	20 ditto
62. Kullinjun	7 ½ ditto ..	15 ditto.
63. Lead, pig, sheet, milled, and small shot,	10 ditto ..	20 ditto
64. Loadh	7 ½ ditto ..	15 ditto.
65. Loban, or benjamin	7 ½ ditto ..	15 ditto
66. Mace	10 ditto ..	20 ditto
67. Madder, or munjeet	7 ½ ditto ..	15 ditto
68. Mahogany, and all other sorts of wood used in cabinet- work	7 ½ ditto ..	15 ditto
69. Mastick	10 ditto ..	20 ditto.
70. Minum, or red lead	10 ditto ..	20 ditto
71. Morinda, or awl root	7 ½ ditto ..	15 ditto.
72. Munjeet, or mudder	7 ½ ditto ..	15 ditto
73. Musk	7 ½ ditto ..	15 ditto
74. Myrobolans, viz. buhera, hurrah, and ownla	10 ditto ..	20 ditto
75. Myrrh	10 ditto ..	20 ditto
76. Nutmegs	10 ditto ..	20 ditto
77. Oils, vegetable or animal (customs)	7 ½ ditto ..	15 ditto
Ditto ditto (town duty)	5 ditto ..	10 ditto
78. Oil seeds (customs)	7 ½ ditto ..	15 ditto
Ditto (town duty)	5 ditto ..	10 ditto.
79. Oils, perfumed or essential, or otter and fooley l teyll	7 ½ ditto ..	15 ditto.
80. Opium, foreign	24 rs. per seer of 80 ca. sa wt.	48 rs. per seer .. 80 ca. sa wt.
81. Orpiment, or yellow arsenic, or hurtaul	10 per cent. ..	20 per cent
82. Otter, or essential oils	7 ½ ditto ..	15 ditto
83. Ownla, or myrobolan	10 ditto ..	20 ditto.
84. Pepper, black and white	10 ditto ..	20 ditto
85. Piece goods, cotton, silk, and partly cotton and partly silk, the manufacture of the Honourable Company's territories in India	2 ½ ditto ..	5 ditto
86. Ditto ditto, when not the manufacture of the Honour- able Company's territories in India	7 ½ ditto ..	15 ditto.

APPENDIX,
No. 4.
continued

Trade with India
Answers to Queries

ENUMERATION OF GOODS.

Imported on a
British Bottom.

Imported on a
Foreign Bottom

87. Pimento, or allspice ..	10 per cent ..	20 per cent.
88. Pipe-staves	7 $\frac{1}{2}$ ditto ..	15 ditto
89. Precious stones and pearls ..	free ..	free.
90. Prussian blue	10 per cent. ..	20 per cent.
91. Putcha paut	7 $\frac{1}{2}$ ditto ..	15 ditto
92. Quicksilver	10 ditto ..	20 ditto
93. Rattans	7 $\frac{1}{2}$ ditto ..	15 ditto.
94. Red sandal wood	7 $\frac{1}{2}$ ditto ..	15 ditto
95. Red lead, or minium	10 ditto ..	20 ditto.
96. Rose water	7 $\frac{1}{2}$ ditto ..	15 ditto.
97. Ruin, from foreign territories in Asia	30 ditto ..	60 ditto
98. Saffron	10 ditto ..	20 ditto
99. Safflower, or coosom fool ..	7 $\frac{1}{2}$ per cent. ..	15 per cent
100. Sago	7 $\frac{1}{2}$ ditto ..	15 ditto.
101. Salt, foreign ..	3 rs. per md of 82 sa. wt per seer ..	6 rs. per maund of 82 sa. wt per seer.
102. Sandal wood red, white, or yellow	7 $\frac{1}{2}$ per cent. ..	15 per cent
103. Sappan, or buckum wood	7 $\frac{1}{2}$ ditto ..	15 ditto
104. Senna	10 ditto ..	20 ditto
105. Soonamookey leaf	10 ditto ..	20 ditto.
106. Spikenard, or juttamunsee	10 ditto ..	20 ditto
107. Spirituous liquors, not otherwise described in this table	10 ditto ..	20 ditto
108. Steel, wrought and unwrought	10 ditto ..	20 ditto
109. Storax	10 ditto ..	20 ditto.
110. Stones (precious) and pearls	free ..	free
111. Sugar, wet or dry, including joggry and molasses (customs)	5 per cent. ..	10 per cent
• Ditto ditto (town duty)	5 ditto ..	10 ditto
112. Sulphur, or brimstone	10 ditto ..	20 ditto.
113. Sunn, hemp, and goomootoo	free ..	free.
114. Tape	7 $\frac{1}{2}$ per cent. ..	15 per cent.
115. Tatzepaut, or malabathrum leaf	10 ditto ..	20 ditto.
116. Tea	10 ditto ..	20 ditto.
117. Teak timber	free ..	free.
118. Thread	7 $\frac{1}{2}$ per cent. ..	15 per cent.
119. Tin and tin ware	10 ditto ..	20 ditto.
120. Tobacco (customs)	4 annas per maund of 80 sa. wt. per seer.	8 annas per md of 80 sa. wt per seer.

ENUMERATION OF GOODS.					Imported on a British Bottom.	Imported on a Foreign Bottom.
	Tobacco (town duty) ..	..	..	..	10 per cent. ..	20 per cent
121	Toond flower .	..	..	..	7 ½ ditto ..	15 ditto.
122	Tugger wood ..	..	..	..	7 ½ ditto ..	15 ditto.
123.	Turmeric (customs) ..	..	..	..	5 ditto ..	10 ditto
	Ditto (town duty) ..	..	..	..	5 ditto ..	10 ditto.
124.	Tutenague ..	..	..	..	10 ditto ..	20 ditto.
125.	Ugger, or aloe wood ..	..	..	..	7 ½ ditto ..	15 ditto.
126.	Vermillion ..	..	..	..	10 ditto ..	20 ditto.
127	Verdigrease .	..	..	..	10 ditto ..	20 ditto
128.	Wax and wax candles .	..	..	..	10 ditto ..	20 ditto.
129.	Wines and spirits, not otherwise provided for				10 ditto ..	20 ditto
130.	Wood, of all sorts used in cabinet work ..				7 ½ ditto ..	15 ditto
131	Yellow ochre, or goopee mattee .				10 ditto ..	20 ditto.
132.	Articles not enumerated above ..				5 ditto ..	10 ditto

Note - A drawback is allowed upon the re-exportation of any of the above-mentioned articles, varying in amount according to the country to which they may be re-exported, and the vessel on which they may be shipped, whether a British or a Foreign bottom.

RATES of DUTY CHARGEABLE, and DRAWBACK ALLOWED, on Articles the Produce and Manufacture of the Country. Exported by Sea from ~~any other Port or Place~~ or any other Port or Place belonging to the Presidency of Fort William.

RATE of INLAND or TRANSIT DUTY PAYABLE	NAMES OF ARTICLES.	If Exported to the United Kingdom, Foreign Europe, or the United States of America.				If Exported to Places other than those in Europe or the United States of America.			
		On a British Bottom		On a Foreign Bottom.		On a British Bottom.		On a Foreign Bottom.	
		Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.
7 ½ per cent.	Ajwain or jowan ..	nil.	¾ of transit duty	nil.	¾ of transit duty	nil.	¾ of transit duty	2 ½ per cent.	nil.
2 ½ do.	Allspice or pimento ..	nil	nil.	2 ½ per cent.	nil.	2 ½ per cent.	nil.	7 ½ do.	nil.
5 do.	Alkali ..	nil.	¾ of transit duty	nil.	nil.	nil.	nil.	5 do.	nil.
7 ½ do.	Alum ..	nil.	¾ of do.	nil.	¾ of transit duty	nil.	¾ of transit duty	2 ½ do.	nil.
10 do.	Alum ..	nil.	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	10 do.	nil.
7 ½ do	Ambergris ..	nil	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	7 ½ do.	nil.
7 ½ do.	Ambergris from Nepal ..	nil	nil.	2 ½ per cent	nil.	2 ½ per cent.	nil.	7 ½ do.	nil.
7 ½ do.	Am-c, or, nowtie, or souf ..	nil	¾ of transit duty	nil.	¾ of transit duty	nil.	¾ of transit duty	7 ½ do.	nil.
10 do.	Arsenic, white, red, or yellow ..	nil.	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	10 do.	nil.
10 do	Assafoetida ..	nil.	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	10 do.	nil.
7 ½ do.	Alkali ..	nil.	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	2 ½ do.	nil.
7 ½ do	Awl-root or morinda ..	nil	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	2 ½ do.	nil.
7 ½ do	Beetle-nut (customs) ..	nil	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	7 ½ do.	nil.
5 do	Do. (town duty) ..	nil.	whole amount of town duty.	nil.	whole amount of town duty	nil.	whole amount of town duty	nil.	whole amount of town duty.
7 ½ do.	Benjamin, or lolan ..	nil.	¾ of transit duty	nil.	¾ of transit duty	nil.	¾ of transit duty	7 ½ per cent.	nil.
2 ½ do.	Do. do. from Nepal ..	nil	nil.	2 ½ per cent	nil.	2 ½ per cent.	nil.	7 ½ do.	nil.
Nil.	Beads, malas, or rozaries ..	nil	nil.	nil.	nil.	nil.	nil.	nil.	nil.
5 per cent.	Blankets and loocytes ..	nil.	¾ of transit duty	nil	¾ of transit duty	nil.	¾ of transit duty	5 per cent.	nil.
2 ½ do	Do. do. from Nepal ..	nil.	nil.	2 ½ per cent.	nil.	2 ½ per cent.	nil.	7 ½ do.	nil.
Nil	Bombax, or produce of the semul tree.	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.
5 per cent	Boots, shoes, and slippers ..	nil.	¾ of transit duty	nil.	¾ of transit duty	nil.	¾ of transit duty	5 per cent.	nil.
5 do	Borax and tincal ..	nil.	¾ of do.	nil.	¾ of do.	nil.	¾ of do.	5 do.	nil.
2 ½ do	Do. do. from Nepal ..	nil.	nil	2 ½ per cent	nil.	2 ½ per cent.	nil.	7 ½ do.	nil.
10 do.	Brass, unwrought ..	nil	¾ of transit duty	nil.	¾ of transit duty	nil.	¾ of transit duty	10 do.	nil.
2 ½ do.	Do. wrought, or unwrought from Nepal.	nil.	nil.	2 ½ per cent.	nil.	2 ½ per cent	nil.	7 ½ do.	nil.
10 do	Brimstone or sulphur ..	nil	¾ of transit duty	nil.	¾ of transit duty	nil.	¾ of transit duty	10 do	nil.

(continued.)

7 ½ per cent.	Brocades and embroidered goods	nil.	¾ of transit duty	nil	2 ½ per cent.	¾ of transit duty	nil.	nil.	7 ½ per cent.	nil.
2 ½ do	Do. do. from Nepal or Oude	nil.	nil.	2 ½ per cent.	nil.	nil.	2 ½ per cent.	nil.	7 ½ do.	nil.
7 ½ do	Bukera, or myrobolan ..	nil.	¾ of transit duty	nil.	¾ of transit duty	¾ of transit duty	¾ of transit duty	¾ of transit duty	2 ½ do.	nil.
7 ½ do.	Buckum, or sappan wood.	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	2 ½ do.	nil.
Nil.	Buggies, carriages, and palankens.	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.
Nil.	Bullion and coin ..	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.
7 ½ per cent.	Caliceerah, or amalia	nil.	¾ of transit duty	nil.	¾ of transit duty	¾ of transit duty	¾ of transit duty	¾ of transit duty	2 ½ per cent.	nil.
7 ½ do.	Campfire ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	2 ½ do. ..	nil.
Nil.	Canvas, cordage, coir, hemp, sunn, or other materials of country growth for the manufacture of canvas or cordage	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.
7 ½ per cent.	Cardamums ..	nil.	¾ of transit duty	nil.	¾ of transit duty	¾ of transit duty	¾ of transit duty	¾ of transit duty	2 ½ per cent.	nil.
7 ½ do.	Carpets and settings ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	7 ½ do.	nil.
Nil.	Carriages, buggies, and palankens	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.
2 ½ per cent.	Cassia from Nepal ..	nil.	nil.	2 ½ per cent.	nil.	nil.	2 ½ per cent.	nil.	7 ½ per cent.	nil.
7 ½ do.	Chanks or saunks ..	nil.	¾ of transit duty	nil.	¾ of transit duty	¾ of transit duty	¾ of transit duty	¾ of transit duty	7 ½ do.	nil.
7 ½ do	Cheyratah ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	2 ½ do	nil.
5 do	Chownies ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	5 do.	nil.
2 ½ do	Do. from Nepal ..	nil.	nil.	2 ½ per cent.	nil.	nil.	2 ½ per cent.	nil.	7 ½ do.	nil.
7 ½ do.	Chucrassy wood ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	7 ½ do.	nil.
10 do.	Chenam ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	10 do.	nil.
5 do.	Chutahs and putties ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	5 do.	nil.
7 ½ do.	Civet ..	nil.	¾ of do. ..	2 ½ per cent.	nil.	¾ of transit duty	2 ½ per cent.	nil.	7 ½ do.	nil.
2 ½ do.	Do. from Nepal ..	nil.	nil.	2 ½ do	nil.	¾ of transit duty	2 ½ do	nil.	2 ½ do.	nil.
2 ½ do	Cloves from Nepal ..	nil.	¾ of transit duty	nil.	¾ of transit duty	¾ of transit duty	¾ of transit duty	¾ of transit duty	2 ½ do.	nil.
7 ½ do	Cochineal or cochineal ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	7 ½ do.	nil.
5 do.	Cocconuts, with or without bark.	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	5 do.	nil.
7 ½ do	Columbo-root ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	7 ½ do.	nil.
7 ½ do.	Cuosom-foss or Safflower	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	7 ½ do.	nil.
7 ½ do	Copal, or kahrotah ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	7 ½ do.	nil.
1 do	Copper, unwrought ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	10 do.	nil.
2 ½ do.	Copper from Nepal ..	nil.	nil.	2 ½ per cent.	nil.	¾ of transit duty	2 ½ per cent.	nil.	7 ½ do.	nil.
10 do	Coral ..	nil.	¾ of transit duty	nil.	¾ of transit duty	¾ of transit duty	¾ of transit duty	¾ of transit duty	10 do.	nil.
7 ½ do	Cerander, or diumna ..	nil.	¾ of do. ..	nil.	¾ of do. ..	¾ of do. ..	¾ of do. ..	¾ of do. ..	7 ½ do.	nil.

RATE of INLAND or TRANSIT DUTY PAYABLE.	NAMES OF ARTICLES.	If Exported to the United Kingdom, Foreign Europe, or the United States of America.				If Exported to the United States of America.			
		On a British Bottom	Rate of Duty to be Charged.	Drawback to be Allowed.	On a Foreign Bottom	Rate of Duty to be Charged.	Drawback to be Allowed.	On a British Bottom	On a Foreign Bottom
12 as. per md. of 96 lb. cutta sea weight, or 5 per ct.	Cotton-wool, in its cleaned state	nil.	whole amount of transit duty.	nil	nil	12 as. per md. of 96 lb. cutta sea weight, or 5 per cent.	nil	nil	nil
4 as. per md. of 96 lb. cutta sea weight, or 5 per ct.	Cotton-wool, in its uncleanned state or in the pod	nil.	whole amount of transit duty	nil	nil	4 as. per md. of 96 lb. cutta sea weight, or 5 per cent.	nil	nil	nil
7 1/2 do.	Cotton-yarn	nil.	2/3 of transit duty	nil	3/4 of transit duty	7 1/2 per cent	nil	nil	nil
5 do.	Cow-tails	nil.	1/2 of do ..	nil.	nil	5 do.	nil	nil	nil
2 1/2 do.	Do. from Nepal ..	nil	2 1/2 per cent	nil	nil	2 1/2 do.	nil	nil	nil.
7 1/2 do.	Camdanab, or cochineal ..	nil	3/4 of transit duty	nil	3/4 of transit duty	7 1/2 do.	nil	nil	nil.
7 1/2 do.	Curumun, or jeerah ..	nil	3/4 of do ..	nil	3/4 of do	2 1/2 do.	nil	nil	nil
5 do.	Dammer, or tosin ..	nil	1/2 of do. ..	nil.	nil	5 do	nil	nil	nil
7 1/2 do.	Dhyc-flower	nil.	1/2 of do ..	nil	1/2 of transit duty	7 1/2 do	nil	nil	nil
7 1/2 do.	Dhunna, or coriander ..	nil	1/2 of do. ..	nil	1/2 of do	2 1/2 do	nil	nil	nil
7 1/2 do.	Dry ginger	nil	1/2 of do ..	nil.	1/2 of do	2 do	nil	nil	nil.
7 1/2 do.	Elephants' Teeth	nil	1/2 of do. ..	nil.	1/2 of do	7 1/2 do	nil	nil	nil.
7 1/2 do.	Embroidered goods and brocades.	nil	1/2 of do ..	nil	1/2 of do	7 1/2 do	nil	nil	nil
2 1/2 do.	Do. do. from Nepal or Oude.	nil	2 1/2 per cent	nil	nil	2 do	nil	nil	nil.
7 1/2 do.	Footleyley, or perfumed oils.	nil	3/4 of transit duty	nil.	3/4 of transit duty	7 1/2 do	nil	nil	nil.
2 1/2 do.	Do. do. from Nepal ..	nil	2 1/2 per cent.	nil	nil	7 1/2 do	nil	nil	nil.
7 1/2 do.	Frankincense or gundeb-roza.	nil	3/4 of transit duty	nil	3/4 of transit duty	7 1/2 do.	nil	nil	nil.
2 1/2 do.	Do. do. from Nepal ..	nil.	2 1/2 per cent	nil.	nil.	7 1/2 do.	nil	nil	nil
7 1/2 do.	Fringes, tape, and thread ..	nil.	3/4 of transit duty	nil.	3/4 of transit duty	7 1/2 do	nil	nil	nil.
2 1/2 do.	Do. do. from Nepal or Oude.	nil.	2 1/2 per cent	nil.	nil	7 1/2 do	nil	nil	nil
5 do.	Furs	nil	1/2 of transit duty	nil	1/2 of transit duty	5 do	nil	nil	nil.
2 1/2 do.	Do. from Nepal	nil	2 1/2 per cent	nil	nil	7 1/2 do	nil	nil	nil
7 1/2 do.	Galbanum	nil	3/4 of transit duty	nil	3/4 of transit duty	2 do	nil	nil	nil

10 per cent. town duty	Ghee	nil	$\frac{1}{2}$ of town duty	nil	$\frac{1}{2}$ of town duty	nil	nil
5 per cent	Gold and silver tissues, lace, and thread	nil.	$\frac{1}{2}$ of transit duty	nil	nil	5 per cent	nil
10 do.	Gooper muttee or yellow ochre	nil	$\frac{1}{2}$ of do	nil	$\frac{1}{2}$ of transit duty	10 do.	nil.
Nil	Grain, of all sorts	nil.	nil.	nil.	nil	nil	nil.
7 $\frac{1}{2}$ per cent.	Gum Arabic	nil	$\frac{1}{2}$ of transit duty	nil	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ per cent	nil.
5 do	Gunnies and gunny-bags	nil	$\frac{1}{2}$ of do.	nil	nil.	5 do	nil.
7 $\frac{1}{2}$ do.	Gundaberoza or frankin- cense.	nil.	$\frac{1}{2}$ of do.	nil	$\frac{1}{2}$ of transit duty	7 $\frac{1}{2}$ do	nil.
2 $\frac{1}{2}$ do.	Do. do. from Nepal.	nil.	nil	2 $\frac{1}{2}$ per cent.	nil.	7 $\frac{1}{2}$ do.	nil.
5 do.	Hides, raw	nil	$\frac{1}{2}$ of transit duty	nil.	nil	5 do.	nil
7 $\frac{1}{2}$ do.	Hookah and hookah snakes	nil	$\frac{1}{2}$ of do	nil.	nil.	7 $\frac{1}{2}$ do	nil.
7 $\frac{1}{2}$ do.	Hurrah or myrobolan	nil	$\frac{1}{2}$ of do	nil	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do	nil.
7 $\frac{1}{2}$ do	Hursingbar flower	nil	$\frac{1}{2}$ of do	nil	$\frac{1}{2}$ of do.	2 $\frac{1}{2}$ do.	nil
10 do	Hurtail, or yellow arsenic, or ornament	nil	$\frac{1}{2}$ of do	nil	$\frac{1}{2}$ of do.	10 do	nil.
10 do	Jarrool timber, red or white	nil	$\frac{1}{2}$ of do	nil	nil	10 do	nil.
7 $\frac{1}{2}$ do	Jeerah, or cummin	nil	$\frac{1}{2}$ of do	nil	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil
5 do	Indigo, on a fixed valuation of 100 rupees per Factory maund	nil	whole amount of transit duty	nil	nil	5 do.	nil
5 do	Do. from Nepal or Oude	nil	$\frac{1}{2}$ of transit duty	nil	2 $\frac{1}{2}$ per cent	7 $\frac{1}{2}$ do	nil
10 do.	Indian red, or ranga muttee	nil	$\frac{1}{2}$ of do	nil	nil	10 do.	nil
7 $\frac{1}{2}$ do.	Jowan or ajwan	nil.	$\frac{1}{2}$ of do.	nil	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil.
10 do	Iron, and manufactured iron	nil	$\frac{1}{2}$ of do.	nil	nil	10 do.	nil.
2 $\frac{1}{2}$ do.	Do. do. from Nepal ..	nil	nil.	2 $\frac{1}{2}$ per cent.	nil.	7 $\frac{1}{2}$ do.	nil.
7 $\frac{1}{2}$ do.	Jatta munsee, or spokenard	nil.	$\frac{1}{2}$ of transit duty	nil	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil
7 $\frac{1}{2}$ do	Ivory	nil	$\frac{1}{2}$ of do.	nil	nil	7 $\frac{1}{2}$ do.	nil
7 $\frac{1}{2}$ do	Kalroba or copal	nil	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do	nil.
7 $\frac{1}{2}$ do	Keorah water	nil	$\frac{1}{2}$ of do.	nil	nil	7 $\frac{1}{2}$ do.	nil.
2 $\frac{1}{2}$ do	Do from Nepal	nil	nil.	2 $\frac{1}{2}$ per cent.	nil	7 $\frac{1}{2}$ do.	nil
5 do	Kutch	nil.	$\frac{1}{2}$ of transit duty	nil	nil.	5 do.	nil.
5 do.	Lack stick, shell, cake, and seed, or poor	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of transit duty	nil	nil
5 do	Lead, gold and silver	nil	nil	nil.	$\frac{1}{2}$ of transit duty	5 per cent.	nil.
5 do	Ladder	nil.	nil.	nil.	nil	5 do	nil
7 $\frac{1}{2}$ do	Lodda	nil.	nil.	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil
7 $\frac{1}{2}$ do	Leban, or benjamin	nil.	$\frac{1}{2}$ of do.	nil	nil	7 $\frac{1}{2}$ do	nil.
2 $\frac{1}{2}$ do	Do. do. from Nepal ..	nil	nil.	2 $\frac{1}{2}$ per cent.	nil	7 $\frac{1}{2}$ do.	nil.

(continued.)

NAME OF ARTICLES		On a British Bottom.		On a Foreign Bottom.		On a Foreign Bottom.	
		Drawback to be Allowed	Rate to be Charged	Drawback to be Allowed	Rate to be Charged	Drawback to be Allowed	Rate to be Charged
7 1/2 per cent.	Long pepper, and its root, called pipplimoot.	2/3 of transit duty	nil	2/3 of transit duty	2 1/2 per cent.	nil	2 1/2 per cent.
5 do.	Lookys and blankets	1/2 of do.	nil	1/2 of do.	5 do.	nil	5 do.
2 1/2 do.	Do. do. from Nepal.	nil	2 1/2 per cent.	nil	7 1/2 do.	nil	7 1/2 do.
2 1/2 do.	Mace, from Nepal.	nil	2 1/2 do.	nil	7 1/2 do.	nil	7 1/2 do.
7 1/2 do.	Madder or munjeet	1/3 of transit duty	nil	1/3 of transit duty	2 1/2 do.	nil	2 1/2 do.
7 1/2 do.	Mustick	1/2 of do.	nil	1/2 of do.	2 1/2 do.	nil	2 1/2 do.
2 Rs each	Matchlocks, to be exported only in the mode directed by section 85, Regulation IX of 1810.	nil	nil	nil	2 Rs each	nil	2 Rs each
2 1/2 per cent.	Mahabathra leaf, or tair-paut, from Nepal	nil	2 1/2 per cent.	nil	7 1/2 per cent.	nil	7 1/2 per cent.
0 do.	Mercury, or snifoor	1/3 of transit duty	nil	1/3 of transit duty	10 do.	nil	10 do.
7 1/2 do.	Morinda, or evil-root	1/2 of do.	nil	1/2 of do.	2 1/2 do.	nil	2 1/2 do.
7 1/2 do.	Mowrie, anise, or souf	1/2 of do.	nil	1/2 of do.	2 1/2 do.	nil	2 1/2 do.
7 1/2 do.	Munjeet, or madder	1/2 of do.	nil	1/2 of do.	2 1/2 do.	nil	2 1/2 do.
7 1/2 do.	Musk	1/2 of do.	nil	1/2 of do.	7 1/2 do.	nil	7 1/2 do.
2 1/2 do.	Do. from Nepal	nil	2 1/2 per cent.	nil	7 1/2 do.	nil	7 1/2 do.
7 1/2 do.	Myrobolans, or bulheria, harab, and overlah.	1/3 of transit duty	nil	1/3 of transit duty	2 1/2 do.	nil	2 1/2 do.
7 1/2 do.	Myrrh	1/2 of do.	nil	1/2 of do.	2 1/2 do.	nil	2 1/2 do.
5 do.	Natron, or subjee muttee	1/2 of do.	nil	1/2 of do.	5 do.	nil	5 do.
7 1/2 do.	Nigella, or calageerah	1/2 of do.	nil	1/2 of transit duty	2 1/2 do.	nil	2 1/2 do.
5 do.	Nubs-sulder, or sal amoni-niac.	1/2 of do.	nil	nil	5 do.	nil	5 do.
2 1/2 do.	Nutmegs from Nepal	nil	2 1/2 per cent.	nil	7 1/2 do.	nil	7 1/2 do.
7 1/2 do.	Oil seeds (custons)	1/3 of transit duty	nil	1/3 of transit duty	7 1/2 do.	nil	7 1/2 do.
5 do.	Do (town duty)	whole amount of town duty.	nil	whole amount of town duty.	nil	whole amount of town duty.	nil
7 1/2 do.	Oils, vegetable or animal (custons)	1/3 of transit duty	nil	1/3 of transit duty	7 1/2 per cent.	nil	7 1/2 per cent.
7 1/2 do.	Do do (town duty)	whole amount of town duty	nil	whole amount of town duty	nil	whole amount of town duty.	nil
1 do.	Oils, perfumed or essential	1/2 of transit duty	nil	1/2 of transit duty	1 per cent.	nil	1 per cent.

2½ per cent	Oils, perfumed or essential, from Nepal	nil	nil	2½ per cent.	nil.	2½ per cent	nil	7½ per cent	nil
Nil	Opium, purchased at the Government sales.	nil	nil	nil	nil	nil	nil	nil.	nil.
10 per cent	Orpiment or yellow arsenic, or hartal.	nil.	½ of transit duty	nil.	½ of transit duty	nil.	nil.	10 per cent.	nil.
7½ do.	Otter, or essential oils ..	nil.	¾ of do.	2½ per cent.	¾ of do.	nil	nil.	7½ do.	nil.
2½ do.	Do. do. from Nepal ..	nil.	nil.	2½ per cent.	nil.	2½ per cent	nil.	7½ do.	nil.
7½ do.	Owala, or myrabolans ..	nil.	¾ of transit duty	nil	¾ of transit duty	nil.	¾ of transit duty	2½ do	nil.
5 do.	Paper, Bengal ..	nil.	¾ of do.	nil.	nil.	nil.	nil.	5 do.	nil.
Nil.	Palankeens, capotes, and buggies.	nil.	nil	nil.	nil	nil.	nil.	nil.	nil
Nil	Pearls and precious stones	nil.	nil.	nil.	nil	nil.	nil.	nil.	nil.
10 per cent.	Peoné ..	nil	¾ of transit duty	nil.	¾ of transit duty	nil.	nil.	10 per cent.	nil.
10 do.	Pepper, black and white ..	nil.	¾ of do.	nil.	¾ of do	nil.	nil.	10 do.	nil.
2½ do	Piece-goods, cotton, the manufacture of Company's territories.	nil.	nil.	nil	nil	nil.	nil.	nil.	nil.
2½ do.	Piece-goods, cotton, from Nepal or Oude.	nil.	nil.	2½ per cent.	nil.	2½ per cent.	nil.	7½ per cent.	nil.
2½ do.	Piece-goods, silk, or partly silk and partly cotton	nil	nil	2½ do.	nil.	2½ do.	nil.	7½ do.	nil.
2½ do.	Pimento or allspice, from Nepal.	nil.	nil.	2½ do	nil.	2½ do.	nil.	7½ do.	nil.
7½ do.	Pipe-staves ..	nil	¾ of transit duty	nil.	¾ of transit duty	nil.	¾ of transit duty	2½ do.	nil.
7½ do	Pyplanour, or long pepper root.	nil	¾ of do.	nil.	¾ of do.	nil.	¾ of transit duty	2½ do.	nil.
10 do.	Prussian blue ..	nil.	¾ of do.	nil.	¾ of do.	nil.	nil.	10 do.	nil.
Nil.	Precious stones and pearls	nil.	nil.	nil	nil.	nil.	nil.	nil.	nil.
7½ per cent	Putchia pant ..	nil	¾ of transit duty	nil.	¾ of transit duty	nil	nil.	7½ per cent.	nil.
2½ do	Do from Nepal ..	nil	nil.	2½ per cent.	nil.	2½ per cent.	nil.	7½ do.	nil.
5 do	Putties and chutnais ..	nil.	¾ of transit duty	nil	nil	nil.	nil.	5 do.	nil.
10 do	Runga muttee, or Indian red.	nil	¾ of do.	nil	¾ of transit duty	nil.	nil.	10 do.	nil.
7½ do	Raw Silk flature, on a fixed valuation of 7 Rs. per seer of 80 Calcutta sa. wt	nil	¾ of do.	nil	¾ of do.	nil.	nil.	7½ do.	nil.
7½ do.	Do would do at 6 Rs. per seer of do.	nil	¾ of do.	nil.	¾ of do.	nil.	nil.	7½ do.	nil.
7½ do.	Raw silk, tushah ..	nil	¾ of do.	nil.	¾ of do.	nil.	nil.	7½ do.	nil.
7½ do	Do chussum ..	nil.	¾ of do.	nil	¾ of do.	nil.	nil.	7½ do.	nil.
5 do	Raw hides ..	nil	¾ of do.	nil.	¾ of do.	nil.	nil.	5 do.	nil.
5 do	Rose-water ..	nil.	¾ of do.	nil.	¾ of transit duty	nil	nil.	7½ do	nil.
2½ do	Do from Nepal ..	nil	¾ of do.	2½ per cent.	nil	2½ per cent	nil	7½ do.	nil.

(continued.)

RATE of INLAND or TRANSIT DUTY PAYABLE.	NAMES OF ARTICLES	On a British Bottom.			On a Foreign Bottom.			If Exported to Places other than those in Europe or the United States of America		
		Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.	
5 per cent	Rosin, or dammer ..	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	nil.	nil.	5 per cent.	nil.	
Nil.	Rozaries, beads, or molahs ..	nil.	nil.	nil.	nil.	nil.	nil.	nil.	nil.	
10 per cent.	Saffron ..	nil.	$\frac{1}{2}$ of transit duty	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	10 per cent.	nil.	
7 $\frac{1}{2}$ do.	Safflower, or cosson-foul ..	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil.	
5 do.	Sal ammoniac, or niths sulder.	nil.	$\frac{1}{2}$ of do.	nil.	nil.	nil.	nil.	5 do.	nil.	
7 $\frac{1}{2}$ do.	Saltpetre ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	7 $\frac{1}{2}$ do.	nil.	
7 $\frac{1}{2}$ do.	Sandal wood, red white, or yellow.	nil.	$\frac{1}{2}$ of do	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil.	
7 $\frac{1}{2}$ do.	Sappan, or buckum wood ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of do. ..	2 $\frac{1}{2}$ do	nil.	
10 do.	Saul timber ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	10 do.	nil.	
7 $\frac{1}{2}$ do.	Saunks or chanks ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	7 $\frac{1}{2}$ do.	nil.	
Nil.	Semul cotton ..	nil.	nil	nil.	nil.	nil.	nil	nil.	nil.	
7 $\frac{1}{2}$ per cent.	Senna ..	nil.	$\frac{1}{2}$ of transit duty	nil.	$\frac{1}{2}$ of transit duty	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ per cent.	nil.	
7 $\frac{1}{2}$ do.	Serrunges and carpets ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	7 $\frac{1}{2}$ do.	nil.	
10 do.	Shawls ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	10 do.	nil.	
4 as. each	Shields, to be exported only in the mode directed by section 85, Regulation IX. of 1810.	nil.	nil	nil.	nil.	nil.	nil.	4 as. each	nil.	
5 per cent	Shoes, boots, and slippers.	nil.	$\frac{1}{2}$ of transit duty	nil.	nil	nil.	nil.	5 per cent.	nil.	
10 do.	Sissoo timber ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	10 do.	nil.	
10 do.	Sindoor or minius ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	10 do.	nil.	
7 $\frac{1}{2}$ do.	Sitaul wood ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	7 $\frac{1}{2}$ do.	nil.	
7 $\frac{1}{2}$ do.	Silk, raw flature, on a fixed valuation of 7 Rs. per seer of 80 Calcutta sa. wt.	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil	7 $\frac{1}{2}$ do.	nil.	
7 $\frac{1}{2}$ do.	Silk, Bengal, wound, on a fixed valuation of 6 Rs. per seer of 80 Calcutta sa. wt.	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do ..	nil.	nil.	7 $\frac{1}{2}$ do.	nil.	
7 $\frac{1}{2}$ do.	Silk, tushah ..	nil.	$\frac{1}{2}$ of do	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	7 $\frac{1}{2}$ do.	nil.	
7 $\frac{1}{2}$ do.	Silk, chussum ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	7 $\frac{1}{2}$ do.	nil.	
5 do.	Soap ..	nil.	$\frac{1}{2}$ of do	nil.	nil.	nil.	nil.	5 do.	nil.	
7 $\frac{1}{2}$ do.	Souf, amsc, or mowne ..	nil.	$\frac{1}{2}$ of do	nil.	$\frac{1}{2}$ of transit duty	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do	nil.	
7 $\frac{1}{2}$ do.	Soonamookey leaf ..	nil.	$\frac{1}{2}$ of do.	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of do ..	2 $\frac{1}{2}$ do.	nil.	
10 do.	Soondry timber ..	nil.	$\frac{1}{2}$ of do	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	10 do	nil.	

7 ½ per cent 6 annas per gal- lon, Police or Excise Duty.	Spikenard, or jutta munsee Spirits, manufactured after the European manner, at any licensed distillery in any of the provinces un- der the Bengal Presiden- cy, provided the quantity be 1,000 gallons or up- wards.	nil.	7 ½ of transit duty 3 as per gallon	nil.	1 ½ of transit duty 1 ½ as. per gallon	2 ½ per cent. nil.	1 ½ as. per gallon nil.
6 annas per gal- lon, Police or Excise Duty.	Do. do. if the quantity be less than 1,000 gallons.	nil.	nil.	nil.	nil.	nil.	nil.
10 per cent.	Steel, wrought or unwrought	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	10 per cent.	nil.
2 ½ do.	Do. do. from Nepal.	nil.	nil.	nil.	nil.	7 ½ do.	nil.
5 do.	Stone plates	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	5 per cent	nil.
7 ½ do.	Stonax	nil.	2 ½ of do.	nil.	2 ½ of transit duty	2 ½ do.	nil.
5 do.	Suytee muttee, or natra	nil.	2 ½ of do.	nil.	2 ½ of do.	5 do.	nil.
5 do.	Sugar, jaggery, goor and syrup (castoma).	nil.	2 ½ of do.	nil.	2 ½ of do.	5 do.	nil.
5 do.	Do. do. (town duty)	nil.	whole amount of town duty.	nil.	whole amount of town duty.	nil.	whole amount of town duty.
10 do.	Sulphur or brimstone	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	10 per cent.	nil.
1 R. each	Swords, to be exported only in the mode directed by section 85, Regulation IX of 1810	nil.	nil.	nil.	nil.	1 R. each.	nil.
7 ½ per cent	Cap. thread, and fringes	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	7 ½ per cent.	nil.
2 ½ do	Tape, thread and fringes, from Nepal or Oude.	nil.	nil.	nil.	nil.	7 ½ do.	nil.
2 ½ do.	Tauzepaut, or malabathran leaf, from Nepal.	nil.	nil.	nil.	nil.	7 ½ do.	nil.
Nil	Teak timber	nil.	nil.	nil.	nil.	nil.	nil.
7 ½ per cent	Thread, tape, and fringes	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	7 ½ per cent.	nil.
2 ½ do.	Do. do. from Nepal or Oude.	nil.	nil.	nil.	nil.	7 ½ do.	nil.
5 do.	Thread gold and silver	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	5 do.	nil.
5 do	Lacal, or beax	nil.	2 ½ of do.	nil.	2 ½ of do.	5 do.	nil.
2 ½ do.	Do. from Nepal	nil.	nil.	nil.	nil.	7 ½ do.	nil.
5 do.	Tissues, gold and silver	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	5 do.	nil.
1 as. per maund	Tobacco (customs)	nil.	whole amount of transit duty.	nil.	all in excess of 5 per cent. on the value.	all in excess of 10 per cent. on the value.	whole amount of town duty.
10 per cent.	Do. (town duty)	nil.	whole amount of town duty.	nil.	whole amount of town duty.	nil.	whole amount of town duty.
7 ½ do	Loon wood	nil.	2 ½ of transit duty	nil.	2 ½ of transit duty	7 ½ per cent.	nil.
7 ½ do	Toond flower	nil.	2 ½ of do.	nil.	2 ½ of do.	2 ½ do.	nil.

(continued.)

RATE of INLAND or TRANSIT DUTY PAYABLE	NAMES OF ARTICLES.	If Exported to the United Kingdom, Foreign Europe, or the United States of America.				If Exported to Places other than those in Europe or the United States of America.			
		On a British Bottom.		On a Foreign Bottom.		On a British Bottom.		On a Foreign Bottom.	
		Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.	Rate of Duty to be Charged.	Drawback to be Allowed.
5 per cent	Toozah, or vitriol ..	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	nil.	nil.	5 per cent.	nil.
7 $\frac{1}{2}$ do.	Tuggur ..	nil.	$\frac{3}{4}$ of do. ..	nil.	$\frac{1}{2}$ of transit duty	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil.
5 do.	Turneric (town duty) ..	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	nil.	nil.	5 do.	nil.
10 do.	Vermillion ..	nil.	$\frac{3}{4}$ of do. ..	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	10 do.	nil.
10 do.	Verdigns ..	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	10 do.	nil.
7 $\frac{1}{2}$ do.	Uggur, or aloe wood ..	nil.	$\frac{3}{4}$ of do. ..	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of transit duty	2 $\frac{1}{2}$ do.	nil.
7 $\frac{1}{2}$ do.	Vidry ware ..	nil.	$\frac{3}{4}$ of do. ..	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	7 $\frac{1}{2}$ do.	nil.
5 do.	Vitriol, or tootesh ..	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	nil.	nil.	5 do.	nil.
10 do.	Wax, and wax candles ..	nil.	$\frac{1}{2}$ of do. ..	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	10 do.	nil.
5 do.	Woolens, viz. looyes and blankets.	nil.	$\frac{1}{2}$ of do. ..	nil.	nil.	nil.	nil.	5 do.	nil.
2 $\frac{1}{2}$ do.	Do. do. from Nepaul ..	nil.	nil.	2 $\frac{1}{2}$ per cent.	nil.	2 $\frac{1}{2}$ per cent.	nil.	7 $\frac{1}{2}$ do.	nil.
10 do.	Yellow ochre, or goopy muttee.	nil.	$\frac{1}{2}$ of transit duty	nil.	$\frac{1}{2}$ of transit duty	nil.	nil.	10 do.	nil.
	Country articles not enumerated in this Table, and which have not been specifically exempted from duty by this Regulation, shall, if they are not liable to any transit or town duty, pay on exportation ..	2 $\frac{1}{2}$ per cent.	nil.	5 per cent.	nil.	5 per cent.	nil.	10 do.	nil.

Note -- The above Duties and Drawbacks are to be charged and allowed on Goods duly covered by Rowannahs evidencing the payment of Inland or Town Duty. No Drawback shall be allowed on any of the said Goods which may be brought for Exportation without a Rowannah, or with a Rowannah of which the period has expired, but on the Exportation of such Goods (except in cases wherein the whole amount of Inland Duty is drawn back), an Export Duty shall be levied, in addition to that specified in the Table, equivalent to the prescribed Transit Duty chargeable on the like Goods, minus the Drawback receivable on the Export of the same.

The extent of the foreign trade to British India may be estimated by the following Statement, showing the tonnage entering Calcutta in the years 1827-28, 1828-29.

	1827-28.		1828-29.	
	Ships.	Tons.	Ships.	Tons.
British	251	97,882	234	101,145
French	25	8,147	34	10,564
Rest of Europe	11	3,443	3	928
America	10	2,788	11	3,526

SUMMARY OF FRENCH SHIPPING.

Arrivals.

1828	...	...	...	...	23 ships
1829	...	...	...	...	24 —
1830	...	...	...	...	20 —

Departures.

1828	...	...	...	...	23 ships.
1829	...	...	...	...	27 —
1830	...	...	...	...	17 —

Of the French trade the largest item is indigo, which forms of their exports from Bengal twenty-two out of twenty-six parts of the whole trade. On this indigo, say 20,000 maunds, the duty charged on its export on foreign bottom is 5 per cent. on the maund, valued at 100 rupees, this being the transit duty which is drawn back upon export on British bottoms. The average price of indigo for nine years, from 1822 to 1830, was 240 rupees per maund, the duty therefore on French shipments is 2½ per cent. only on its real value. The object of the French government, since 1815, seems to have been the increase of the direct trade between France and British India, and to this the French tariff has been directed. Upon the introduction of indigo into France by a French ship,

The duty is	...	...	...	...	1 0 franc per kilogram.
From European entrepôt	...	...	...	...	3 0 ditto ditto
From any entrepôt out of Europe	...	...	...	...	1 40 ditto ditto

Thus the admission of indigo direct from England, or by English ships, into France, being prohibited by the French navigation laws, indigo sent *via* Ostend is charged with three times the duty levied on indigo imported direct from India on a French ship, and *via* America 40 per cent. only. The effect of this on a maund of indigo may be estimated as follows :

APPENDIX,
No. 4.
continued.
Trade with India.
Answers to Queries.

DIRECT : *			LONDON.			France.
1 maund, cost ..	200 rupees		1 maund, cost ..	200 rupees		500
Duty ..	5 —		Import :	£ s d.		
	205 or	Francs.	Freight at ..	0 8 6		
		525	Insurance ..	0 10 0		
Freight, about ..	14		Charges ..	0 12 0		
Insurance ..	20			1 10 6=		38
Duty ..	33		Export			
Charges, 2 per cent.	11		Com. brokerage ..	0 12 0		
		78	Charges ..	0 2 0		
		Cost	Freight and Charges ..	0 8 4		
		603		1 2 6=		28
						566
			Landing charges } in France .. }	10 francs		
			Duties ..	99 —		109
						Fr. 675

Thus giving a much greater advantage to direct shipments than to the entrepôt imports. Hence the result has been, that the exports of colonial produce from British ports, since the new regulation of the French tariff in 1825, have nearly ceased.*

The right of France to encourage her direct trade cannot be disputed ; but it is a question whether, as it is equally the right of Great Britain to impose such a duty in India as would bring the indirect trade through England by English ships to a nearer level with the French direct trade, it would not be expedient to do so by increasing the duty levied on export in India.

The trade between France and British India is chiefly carried on by British capital, by credits from English houses.

The entrepôt trade *via* Ostend is carried on principally, though not exclusively, by Belgian ships to Ostend, where the goods are unloaded in port, and French ships receive them and carry them to a French port.

Under this head of inquiry some observations may be made upon our relations with the Netherlands, and the infringement by its government of the treaty with Great Britain of 1824, who have imposed duties upon British manufactures imported into Java almost prohibitory.

In the latter part of the year 1824, strong remonstrances were made upon this subject to the India Board,† and under date 30th January 1826, the following communication was made to the London merchants from the India Board : “ That Mr. Secretary Canning had addressed to the Netherlands Government remonstrances on the duties in question, as

* Reduced 95 per cent

† See Evidence, Maclean, Deans, &c.

as being in opposition to the object and spirit of the treaty of the 17th March 1824; that in reply, assurances had been given on the part of the King of the Netherlands of his disposition to consider the subject with a view to the modification of the duties." But since that period, although repeated applications have been made, no decisive answer has yet been returned by the Netherlands Government. The duties remain, and the trade is almost gone from Great Britain.*

How far, under the altered circumstances of the Netherlands, and the separation of Belgium from Holland, by which it no longer becomes the policy of Holland to protect the Belgian manufactures, it may not be advantageous to press the subject on the attention of the Dutch government, is a matter which must be left to the discretion and superior knowledge of Government.

All that seems necessary to be done is to go into a careful revision of the existing system of duties and restrictions, and to modify them in whatever degree may be found to be at once beneficial and practicable.

Manchester Chamber of Commerce

Foreign States are perfectly free to trade with India, and ought, in our opinion, so to remain; but the free port of Singapore has been hitherto shut against American ships, under some doubts of their right by the treaty with the United States to admission there; it is understood that that restriction has lately been taken off, though we have not seen any official notice of it.

Glasgow Chamber of Commerce

Goods by foreign vessels, as well exports as imports, are subjected to duties in the ports of India, from which those by British vessels are either entirely exempted, or pay a lower rate.

Liverpool East-India Committee.

With a view to the great object of the advancement of India, we conceive it would be expedient to abolish these extra duties, in order to promote the free intercourse of foreign countries with India. Their continuance may also drive foreigners to resort to French, Dutch, or other settlements, in preference to the ports of British India. But the direct trade between India and China, and Great Britain, ought of course to remain in the possession of the British and Indian ship-owner.

Foreign ships trading with India are subjected to additional duties, and I am not aware any change could be made as to foreigners, for the benefit of India, without prejudice to the interests of this country.

Mr. Mackillop

Foreign bottoms pay double duties, I think, on all imports. I see no reason why they should not be put upon an equal footing.

Mr. Bracken

The

* By the treaty, the duties on British manufactures, where there are none levied on Dutch articles of the same kind, ought to be 6 per cent., and where the Dutch are 6 per cent. British should pay 12 per cent. The double duties on foreign fabrics being the principle adopted.

The existing duties are,—on Woollens and cottons, Dutch, 6 per cent., British, 25 per cent., and 5 per cent. thereon, making 26½ per cent.; and the articles are subject to an arbitrary valuation every three months.

On hardware, on a valuation taken at 30 per cent. above the invoice, British pay 12 per cent., whereas the Dutch pay 6 per cent., and upon the invoice.

Commercial

Mr. Hill

The trade between foreign States and India is subject to double duties. The general interests of commerce would be promoted if it were subject only to the same rates of duty as the trade between India and Great Britain.

Mr. Langton.

I have never heard it complained that the present arrangements with European or (American) foreign states, in regard to trade with India, stood in need of improvement or alteration.

Mr. Wood

All foreigners are allowed to resort to the ports of India on payment of the port charges, and to purchase whatever articles they may wish, and to ship them for Europe or elsewhere, on payment of the custom duties; and inasmuch as the foreign trade is not exempted from the payment of the customs, in the same way as the exports to England, Territory benefits more by the trade of foreigners than by the trade with Great Britain. Foreigners, with the special sanction of the Government, are permitted to establish themselves in the interior of the country, and some of the indigo factories are, I believe, carried on partly with foreign capital, although not to any great extent.

Mr. Lloyd

I am not officially cognizant of the arrangements with foreign states with regard to trade with India; the Indian duties upon foreign trade are double, as compared with the duties upon imports by British ships; but in whatever degree foreign trade can be encouraged, it will tend to augment the resources of India, and may give facilities by indirect means in accomplishing the annual remittance required by England, provided it does not displace an equal amount of British trade.

Mr. Mackenzie

The rules applicable to the trade of Europeans, Foreigners, and Americans, will be found stated in Regulations VII. of 1818, and XV. of 1825, of the Bengal code. Native traders are not distinguished from British subjects. I am not aware of any change that could be made likely materially to affect the commerce of the country, though I might be disposed to get rid of the restrictions to which foreigners are subject in regard to the destination of the goods exported by them; and the excess of customs charged on their imports above those chargeable on articles imported on English bottoms, should I conceive be a distinct tonnage duty, not a per-centage on the value of the goods. On the other hand, in stipulating for the admission of British manufactures into foreign states or their colonies, we should have looked more to the cargo and less to the vessels employed.

Mr. Crawford.

The general rule, with respect to the duties on foreign goods, is to impose a double duty on all merchandize imported on a foreign bottom, and when the article would be free in a British bottom, to charge the lowest British duty, namely, two and a half per cent. With respect to exports the duties are always inconsiderable, and the difference between those imposed on merchandize exported, under the British and American flag especially, are very inconsiderable. The higher duties imposed on importations under a foreign flag appear to me to throw needless impediments in the way of the trade of India, and to afford no necessary protection to British trade, which stands on higher grounds,—its capacity to furnish the consumer at a lower cost, and to give the producer a higher price. This assertion, I think, may be easily proved. The subjects of the United States are the only rivals from whose competition we can have any reasonable ground for apprehension. In the three years ending with 1810-11, and when their only competitor was the East-India Company,

Company, their exports from British India amounted to £1,705,814. In 1828-29 they fell to £162,258,* or to less than *one-tenth* of that amount. It is certainly not the rate of duty, but the open competition of the British merchant which has brought about this result, for the duties were far heavier before the opening of the free trade in 1814 than they have since been, or than they are at present. The monopoly of the colonial or carrying trade of India is a sufficient, perhaps more than a sufficient protection for British commerce, and the effects of the competition of this branch of our trade with the Americans and with the East-India Company, as far as they admit of fair comparison, may be adduced in proof. In 1813-14 the export and import trade of private British ships with Canton amounted only to 9,897,044 Spanish dollars, or to less than two millions sterling per annum, while in 1829-30 it rose to 31,368,300 Spanish dollars, or to upwards of six millions sterling. The trade of the East-India Company with Canton, including that of England and India, amounted in 1813-14 to 13,550,700 Spanish dollars, or to about £2,700,000, and in 1829-30 it had fallen off between £300,000 and £400,000. The means do not exist of instituting a fair comparison between the British country trade of India and that of the Americans. In 1816-17, the first year after the war, in which the American trade with Canton was re-established, the exports and imports amounted to 11,312,600 Spanish dollars, and in 1829-30 only to 8,026,243 Spanish dollars, showing a decline of above £600,000. A part of this decline may be ascribed to the competition of the free trader in the articles of opium, raw silk, cassia, camphor, and other Chinese exports, of which three last commodities † the Americans may be considered until of late years as having enjoyed a monopoly. It is proper, however, to state, that other obvious causes have been in operation to reduce the amount of the American trade. The American teas have been in a good measure excluded from the ports of France and Holland by protecting duties, and from the British possessions in North America by the recent exercise, in these, of the Company's monopoly; and bills having been substituted for dollars in the imports, their amount is necessarily excluded from the estimated value of the whole trade. For the reasons now stated, I am of opinion that countervailing duties are not necessary for the protection and security of the British trade with India, and that as far as foreign competition is concerned, all that is necessary to it is unfettered freedom. I am equally of opinion that the confining the American trade to four ports of British India is vexatious and uncalled for; and as far as relates to its exclusion from Singapore in particular, I am convinced, from personal experience, that it is highly prejudicial to the interests of British commerce, the operations of which are narrowed and restrained by it.

While we recommend that a liberal policy should be observed towards foreign states in their intercourse with India, the trade between India and China and Great Britain should most decidedly be secured to the British and Indian shipowner.

Hull Committee.

QUERY

* Report of the Committee of Correspondence of Court of Directors, 1813.—Report of Select Committee of 1831.

† These articles can only be imported into Great Britain in the open trade after trans-shipment at a British port in India. In the accounts they are consequently represented as Indian importations. The raw silk cannot be distinguished from Indian, but the following Statement will show the increase in camphor and cassia, the peculiar products of China, and I add the article of tortoise-shell, which, although not the produce of Chinese industry, was for the most part imported from China before 1814.

	1814.	1828.	Increase per cent.
Camphor	248,754	373,428	50
Cassia and cassia buds	173,988	571,560	228
Tortoise-shell	3,775	27,361	624

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries
Mr Bracken

QUERY X.—Are there any, and what, Benefits derived by the Revenues of Great Britain from the present System for conducting the Trade with India and China, which would be lost by a Change of System?

Answer.—I CANNOT contemplate any loss whatever to the revenue by throwing open the trade to the fullest extent. On the contrary, I calculate on an increase of consumption, the duty remaining the same, consequent on reduced price. The evidence, however, on the China trade is so complete and conclusive, that it is unnecessary for me to make any observation regarding it.

Glasgow Chamber
of Commerce

We are of opinion, that no benefits derived by the revenues of Great Britain from the present system of conducting the trade with India and China would be lost by a change of system. In a free and open trade with China, the duty on tea would of course have to be collected at the different ports of Great Britain, in the same manner as the duty on tobacco, brandy, &c. This might occasion a little additional trouble, and perhaps expense, at the different custom-houses, greater than is incurred by the present method of collecting it through the East-India Company, but which would, we have no doubt, be much more than compensated by the increase in the consumption of that article.

Liverpool East-
India Committee

We believe there are no benefits derived by the revenues of Great Britain from the present system for conducting the trade with India and China, which would be lost by a change of system. When a free trade in tea is permitted, there may either be a specific duty according to quality, or an *ad valorem* duty may be collected upon the auction sales made at the different seaports, in the same mode, and with equal security, as the duty on the Company's sales is now collected.

That there will be a material increase in the consumption of tea, consequent upon such a reduction of price and improvement in quality as will be experienced under the free trade system, there can be no doubt, the duty on which increase will fully compensate for the effect of lower prices; and there is every ground for believing that the removal of those restrictions which now prevent the resort of British shipping to the Chinese seas, would lead to the development of new branches of trade, with ports rarely if ever previously visited, and would tend materially to increase the trade, and prove a fresh source of revenue to this kingdom. So far, therefore, from the revenue being impaired by a change of system, we feel assured it would be greatly benefited thereby.

The risk of loss to the revenue by smuggling will, in the article of tea, be lessened by the opening of the trade, as the temptation now held out by the high monopoly price of the East-India Company, compared with the price in the neighbouring Continental ports, would be entirely removed, for there can be no doubt that British merchants in a free trade would import teas at least as cheaply as French, Dutch, or other Continental merchants can do.

Manchester Cham-
ber of Commerce.

The Board is not aware of any. The monopoly by the Company of the trade with China has been occasionally represented by their advocates to be beneficial to the revenue of Great Britain, but from this doctrine we must entirely dissent. It has been satisfactorily shown, in the evidence taken by the Parliamentary Committees during the present inquiry, that tea could be imported cheaper by the private trade than it has ever been by the Company. If this fact be acknowledged, it follows that the article might, if necessary, be made to yield even a heavier revenue than it does at present, instead of its becoming smaller.

As to the benefits derived by the revenues of Great Britain from the present system of conducting the trade with India and China, presuming this question relates mainly to the tea trade, it may be assumed as admitted that the present system of ascertaining and collecting the duties upon tea is not susceptible of improvement; by the plan of public sale and great competition the full value is obtained, a point most essential in the case of a duty *ad valorem* of 100 per cent.; and by the duty being required by the Company, and paid over to the Crown without any charge in respect thereof, the large revenue of £3,300,000 is realized in the Exchequer at an expense of about £10,000.*

In the event of any extensive alteration of the present system, such as the free admission of the British public to the trade in tea, it is presumed that neither the same protection to the revenue, nor the same economical mode of collecting it, can be expected; the duty must be either an *ad valorem* or a rated duty.

If a duty *ad valorem* be continued, and that value is to be ascertained by a declaration of the value by importers, a wide door will be opened for fraud upon the revenue, by reason of the difficulty of forming a judgment of the value of an article requiring most elaborate examination to ascertain its quality.

According to the evidence given in the year 1813, before both Houses of Parliament, by officers of His Majesty's Customs and Excise, and by intelligent tea-brokers,† the substitution of a rated duty, so as to protect the revenue, appears also to be beset with difficulties, arising from the varied qualities in teas of the same general denominations. In addition to these considerations, it is presumed that under the present system, from the absence of all personal interest in the issue of smuggling transactions, there is another important protection to the revenue.

The economical collection of this revenue at present is undoubted; the gross charge of collecting the excise duties, tea included, is stated in the Public revenue accounts to be £4. 18s. 9½d. per cent.: if the tea revenue, and the expense of its collection, be deducted from the gross Excise revenue, the per-centage of all exciseable articles excepting tea would be £5. 16s. 9d. per cent.; the expense of collecting the tea duty is about 6s. 1d. per cent.

All these considerations lead to the conclusion, that the probable effect of an extensive alteration of the present system will afford facilities for defrauding the revenue, and that the expense of the collection will be materially increased; nor does it appear to me that any equivalent advantages can be secured under the alteration.

A considerable reduction of the rate of duty would probably be the only mode of preventing smuggling, under the altered system.

The alleged cheap collection of the duty on tea is an obvious and gross exaggeration; not the lockers only in the London tea warehouses, as pretended by the Company, but the inspectors of wholesale and retail stocks throughout the land, a proportion of the charges of the Preventive Service, of the Excise Board, and even of the Customs, constitute the expense of collecting this duty.

It has been said that an *ad valorem* duty could not be collected on this article in the outports; but if an *ad valorem* duty should be found preferable to one by the weight, according to the description of tea, as in America, there is no doubt it could be levied as correctly, in the greater outports at least, as in the ports of London.

If

* Evidence before Committee on East-India Affairs, 3d June 1830.

† See Evidence before the Lords:

Mr. Nicholas, Commissioner of Excise; Mr. Roe, Commissioner of Customs; Mr. Wilson, ditto.

Evidence before the Commons:

Mr. Vivyan, Solicitor to the Excise; Mr. Roe, Commissioner of Customs; Mr. Jarken, tea-broker; Mr. Venn, ditto; Mr. Styan, ditto.

APPENDIX,
No. 4.
continued.

Trade with India
Answers to Queries.

If a change in the system of this trade should reduce the sale price, and with it the duty, the consequent increase of consumption would probably more than compensate for such reduction, independent of the benefit which would result to the revenue, the manufactures and general commerce both of this country and of India, from the increase of old and the development of new branches of trade, with countries rarely heretofore visited by our commercial marine or our merchants, owing to the rigid exercise of the exclusive privileges of the East-India Company.

Mr Crawford.

I am not aware of any benefits which the public revenue derives from the present system of conducting the trade with India and China, which would be lost by abandoning what remains of the system of monopoly. In the discussions which preceded the Charter of 1813, it was warmly argued that an open trade would inevitably give rise to extensive smuggling, and with a view to restrain this anticipated contraband trade, many needless precautions were taken by the Legislature. The most important of these have since been wisely abandoned, and the experience of near eighteen years has proved that they were utterly unnecessary. There has been no smuggling in the Indian trade. I am not even aware that since 1814 a single allegation has been made to this effect. A small quantity of teas, silks, and perhaps some other Indian commodities, has, since the commencement of the present Charter, no doubt been smuggled into the kingdom, but not through the regular shipping carrying on the trade between Great Britain and India, but, as had been early predicted, from the far more convenient position of the opposite coast of the Continent.

Before the commencement of the present Charter, the duties on all articles imported from the East-Indies and China were, with inconsiderable exceptions, paid by goods imported by the East-India Company. At present the Company may be said to contribute to the revenue only through the importations of tea, leaving all other articles to the free trade. The effects of the monopoly and of the open trade, in so far as concerns the public revenue, may therefore be seen by comparing the amount of duties on tea and on all other articles before and since 1814. I have not at hand any document to refer to for the precise amount of the revenue derived from East-Indian importations prior to 1814, but to the best of my recollection they amounted, tea excepted, to about

£761,156. In 1828, not a productive year, they amounted to £761,156. This at least shows that the free trade has proved far from detrimental to the revenue. The increase which has taken place is the more remarkable, when we consider the great reduction which in most instances has been made in the rates of duty, as will appear by the following short enumeration.

GOODS.	Duty in 1814	Duty in 1828.
	s. d.	s. d.
Coffee	—	0 9 per lb.
Cotton Wool	16 11 per 100 lbs.	6 per cent.
Indigo	0 2½ per lb.	0 3 per lb.
Saltpetre	0 4½ — cwt.	0 6 — cwt.
Raw Silk (Bengal)	3 9 — lb.	0 1 — lb.
Ditto (China)	5 7½ — lb.	0 1 — lb.
Ginger	22 1½ — cwt.	11 6 — cwt.
Pepper	1 10½ — lb.	1 0 — lb.
Sugar	30s. & 33s. per cwt.	37 0 — cwt.

The revenue derived from tea in Great Britain and Ireland, in the eight years from 1814-15 to 1821-22, and in the subsequent eight years ending with 1829-30, were respectively as follow :

First period	...	...	...	...	...	£30,504,615
Last period	...	...	...	...	...	29,838,601

This exhibits a falling off of above £600,000, or at the rate of above £80,000 per annum, although the duty in the last period was generally four per cent. higher than in the first.* The advantages to the revenue, therefore, as far as the imperfect materials within my reach afford me the means of judging, seem all to be in favour of those articles which have come under the management of the open trade. Under the free trade, with reduced duties, the revenue has advanced : under the monopoly, with increased duties, it has declined.

A note to the return of the tea revenue, given in to the Select Committee of the House of Commons in 1830, states, that "the tea duties are collected by the East-India Company, and paid over to the Crown, without any charge whatsoever in respect of such collection ;" and it was attempted to be shewn, before the same Committee, that the whole excise charges on account of the collection of the tea duties were under £11,000 per annum. Upon these extraordinary assumptions comment is hardly necessary. The vigilance of His Majesty's navy, of the preventive service, and of the establishments of the customs and excise, are equally exercised, as every one is aware, in the protection of the tea duty as in that of any corresponding branch of the public revenue, and if they were not so exercised, it is plain enough that no duty could be collected. Tea, therefore, in common with tobacco, foreign spirits, and similar commodities, is justly and properly chargeable with its due share of all the establishments employed for the security and collection of the general revenue. By the regulations established at the India House, under the sanctions of Acts of Parliament, the purchasers of tea pay the whole duties before the tea is delivered. All that remains to the Company to do is to pay them over to the Excise. For the performance of this easy function, the cost to the State appears to me to be, without reference to the restraints imposed by the monopoly of commerce, exactly the difference of price between the cost of tea under the present system and in an open trade. Judging from the fair and ample experiment made under the sanction of the Board of Control in 1830, this difference, calculated upon our present consumption, is not less than £1,800,000 per annum.† It is obvious that this amount might be taken by the State in the shape of revenue, without enhancing the price of tea to the consumer one farthing. It is a charge of collection, therefore, independent of a proportion of the usual establishments engaged in the protection and collection of the general revenue, of certainly not less than from fifty to sixty per cent., viewing the services of the East-India Company merely in a fiscal point of view. This will sufficiently show that the tea duties are not only not collected "without any charge whatsoever," but that they are infinitely more costly in the collection than any similar branch of the public revenue, indeed, than any branch of it whatever. I will add, that a revenue collected at such a charge, and supposing no cheaper means could be devised of realizing it, is one which ought not to exist at all in any well-regulated country. In so far as the services of the Company are concerned in the collection of the tea duty, the result is this, that for every 20s. taken from the pockets of the people, scarcely 13s. find their way into the Treasury.

The benefits derived by the revenue of Great Britain from the present system for conducting the trade with China is, that a large amount of revenue is paid into the Exchequer without risk and without expense. The effect of any extensive alteration in that system would certainly be to subject this branch of revenue to the ordinary charge for collection, and probably to a great risk of smuggling. I apprehend there would be much difficulty

Mr 11b.

* Appendix to First Report of 1830, pp. 930 and 940.

† First Report of 1830, p. 742, and Appendix.

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Trade with India
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difficulty in levying an *ad valorem* duty as at present, and that, to escape as much as possible from that difficulty, the duty would need to be made either more burdensome or less productive.

The most serious objection to any extensive change of system is, in my judgment, the hazard, to which I have already adverted, of a repeated or protracted interruption of commercial intercourse with China, which would not only affect the revenues of Great Britain when it occurred, but would probably affect them permanently, by putting an end to the national preference for tea.

Mr. Mackenzie.

On this point I have nothing to communicate to the Board, to whom it would be useless to state the facts and arguments, which will be much more ably, and with fuller information, urged by the gentlemen, of the existing system, still more those which will reach them from a thousand quarters in recommendation of a change. I do not understand that the Board desires, and I cannot imagine it would value, my bare opinion upon such a question.

Mr. Mackillop.

It will be obvious to you that the revenue of India is deeply interested in the trade with China as well as that of Britain, and any interruption to that source of supply detrimental to the one, would in all probability be equally felt by the other. The most direct answer I can give to your query is, that the risk of loss to the revenue of both countries will depend on the extent of any change that may be made in the present system. I presume any alteration which it may be proposed to make, will have in view the increase of the export of British manufactures, and larger import of tea at a cheaper cost. These are doubtless objects of great importance; but in seeking to obtain them, we must be careful to avoid the risk of losing what we already possess. I consider our commercial intercourse with China as being of a somewhat uncertain character. It is not secured by treaty; it is, in fact, rather permitted than sanctioned by the Chinese government, and subject to the whim and caprice of a despotic power.

Mr. Larpent.

The care and facility with which the revenue on tea is now raised is certainly *prima facie* a cogent argument for the maintenance of the present system; but what reason is there for supposing it would diminish upon a change of system, and the substitution of private for the Company's trade? The immediate effects would probably be a rise of price of tea in China. The demand of private speculators would probably be excessive, as it always is on the opening of a new trade; and the necessity of bringing home return cargoes for speculative exports to China would induce the owners of ships from London and the outports to bring more tea than the market would consume, and at higher prices than the Company's supply. The check upon this would be, the want of arrangement in China until commercial establishments are formed, and if that operates strongly, the supply of tea may be smaller; but this difficulty would soon be overcome, and meanwhile the two years' supply of the Company would feed the home market; and if the home prices were raised, the revenue would rise with them. But in a short time, it is to be presumed, the average supply will be furnished as heretofore, and if an excess of the present supply, and prices fall in England, the duty will be on a larger quantity; and the consumers of tea, having a surplus of the money heretofore applied to its purchase, may afford to increase their consumption of sugar or other highly-taxed article.

How would the year's supply left in the Company's hands when the charter expires affect the market as respects the private trader?

The charges of collecting the revenue generally might be reduced by employing Dock Companies.

Thus far as to amount of revenue under a change of system. As to security of revenue, it does not seem probable that, if all tea cargoes were compulsorily brought into docks with bonded warehouses, and the dock companies allowed to take the duty, that the revenue

venue would be less protected, or collected at a greater expense than as at present by the East-India Company.

Again, the introduction of tea into the bonded warehouses of Liverpool or Glasgow, and perhaps an extension of an *internal* bonding system, would bring tea cheaper to the consumer and increase his consumption, and the cheapness would not be on the *upset* price to affect the revenue, but on the retail price; so that the country, the manufacturers, and others in the lower and middle classes, would benefit, and the revenue not be diminished.

But whilst the advantages to India of opening the China trade, in a commercial point of view, are thus set forth, and it is attempted to be proved that the revenue would not suffer, there is much yet to be considered before the agency of the Company in the China trade be entirely done away with.

The substitution of cheap ships and moderate freights for the present expensive vessels of the Company, and the admission of private enterprise and skill into the trade, both as respects India and England, are obvious advantages; but the attempt to purchase them may be inexpedient, if there be any real danger of shutting out the British trade altogether from China in making the experiment.

The evidence before Parliament as to the temper and character of the Chinese government is conflicting. That the trade between China and England is more advantageous to the latter than the former cannot perhaps be denied.

What has been done in Japan against Europeans may be done in China. A recourse to arms to compel the Chinese to trade would be an experiment of which the injustice and expense would be certain, and the result very problematical. On the other hand, the existence of the American trade, and of the Indian country trade with China, affords a strong argument for the expediency of trying the open system; but as these trades have grown up under the East-India Company, their existence is not perhaps conclusive evidence of the safety of a free trade without the Company.

Will the Chinese bear the introduction of British manufactures? See the account of riots upon the use of British yarn. The Chinese follow the old mercantile European system, and confine the tea trade to Canton, though the tea be grown in a distant province, in order to give employment to their people to carry it to Canton.

A gradual enlarging of the private trade, taking away all that is not absolutely of benefit to the Company, opening what the Company do not use themselves, that is, giving to the private trade all but the purchase of tea, might be attempted on the renewal of the present Charter, and a clause inserted for the power of a gradual change to an entire free trade, to be reserved by Parliament, on certain conditions to the Company as to their dividend, &c.

If the outward trade to China were perfectly free, and the Company's exclusive privilege be confined to the purchase of tea from the Hong, and its sale to the exporter or his agents, the prejudices of the Chinese might not be shocked, and the oppression and chicanery of the Chinese might be resisted more successfully than by individuals, and adulteration of the article prevented, which, if carried to an excess, would stop its consumption.

The free traders might employ the Company's Factory or not as they pleased: and the Company's Factory should be confined to a certain limited per-centage on the cost; or, to prevent abuse, a certain rated charge per pound weight.

The Company's Indian treasury might provide a large portion of the funds for the purchase, and pay the Territorial charges at home, by the bills drawn against the tea payable in England. The consumption of tea is too general, the demand too certain, to entertain a doubt of the private trader taking off the tea from the Company; and the suggestion is offered only as a *mode* (complicated perhaps, and therefore not desirable) of avoiding collision with the Chinese, and the possibility of a rupture with a nation so singular and so jealous, and consequently of the loss of so valuable and important a branch of trade.

APPENDIX,
No 4
continued

Trade with India
Answers to Questions
Hull Committee
Mr Rickards

We cannot contemplate the loss of any benefits derived by the revenue of Great Britain from the present system of conducting the trade with India and China, should a change of system take place; on the contrary, we believe the revenue would be materially benefited by the increased trade we anticipate, but particularly by the importation of tea.

I believe I am not outstepping the bounds of discretion when I assert, that if the Company's trade to India and China were entirely abolished, the commercial intercourse of Great Britain with the East would speedily be increased to tenfold its present amount; if so, it is obvious that the public revenue, so far from losing, would be benefited in proportion by this auspicious change.

QUERY XI.—Can any Measures, not involved in previous Questions, be suggested, calculated to advance the Interests of Indian Commerce, such as the Improvement or Increase of the Exportable Productions of India, &c. &c.

Mr Larpent
Sir C. Forbes'
Evidence

Answer.—The measures proposed to benefit Indian commerce are,

1. A remodelling of the Customs table; for the expediency of which, see Statement delivered to the Board of Trade in 1831.
2. Equalization of the duties on Indian sugar; difference 10s. per cwt.
3. Reduction of duties on Indian cotton and silk manufactures;* which pay here 10 and 20 per cent. *ad valorem*, whilst British manufactures in India pay 2½ per cent. only; and alteration in mode of taking the same on silk piece-goods, in London by Company's sales, in Liverpool by valuation.

PETITION of Natives of Bengal relative to Duties on Cotton and Silk.

Calcutta, 1st September 1831.

To the Right Honourable the Lords of His Majesty's Privy Council for Trade, &c.

The humble Petition of the undersigned Manufacturers and Dealers in Cotton and Silk Piece-Goods, the fabrics of Bengal;

Sheweth,

That of late years your Petitioners have found their business nearly superseded by the introduction of the fabrics of Great Britain into Bengal, the importation of which augments every year, to the great prejudice of the native manufactures.

That the fabrics of Great Britain are consumed in Bengal without any duties being levied thereon to protect the native fabrics.

That the fabrics of Bengal are charged with the following duties when they are used in Great Britain:

- On manufactured cottons, 10 per cent.
- On manufactured silks, 24 per cent.

Your Petitioners most humbly implore your Lordships' consideration of these circumstances, and they feel confident that no disposition exists in England to shut the door against the industry of any part of the inhabitants of this great empire.

They

They therefore pray to be admitted to the privilege of British subjects, and humbly entreat your Lordships to allow the cotton and silk fabrics of Bengal to be used in Great Britain "free of duty," or at the same rate which may be charged on British fabrics consumed in Bengal.

Your Lordships must be aware of the immense advantages the British manufacturers derive from their skill in constructing and using machinery, which enables them to undersell the unscientific manufacturers of Bengal in their own country; and although your Petitioners are not sanguine in expecting to derive any great advantage from having their prayer granted, their minds would feel gratified by such a manifestation of your Lordships' good-will towards them; and such an instance of justice to the natives of India, would not fail to endear the British Government to them.

They therefore confidently trust, that your Lordships' righteous consideration will be extended to them as British subjects, without exception of sect, country, or colour.

And your Petitioners, as in duty bound, will ever pray.

Signed by 117 natives of high respectability.

4. Opening new ports for the importation of Indian goods, and extension of the bonding system into the interior of the kingdom on articles heavily taxed.

5. Encouragement to persons to settle in India.

Colonization is neither practicable nor desirable; but the settlement of respectable persons is most important for the improvement of Indian produce.

Whilst the law remains as it is, respectable persons will not subject themselves to the power of deportation; and to control the idle and adventurous persons who go out under the existing regulations that power may be necessary. Practically, at Calcutta, Madras, or Bombay, the trader is secure; but to make him and his skill and capital useful to India, he should be encouraged to go into the interior, and his rank and station, in relation to the covenanted servants of the Company, improved. The question, however, is one of much difficulty, and it is not easy to make any single alteration in so complicated a system with safety; the change must be general, and of the system itself.

RESOLUTIONS OF LONDON MERCHANTS.

At a Meeting of the Merchants and Agents in London connected with the Trade of the East-Indies, held at the office of the East-India Trade Committee, Broad-street, on Tuesday, March 24, 1830; Richard Campbell Bazett, Esq. in the Chair:

The Report of the Committee appointed at a previous meeting, consisting of the following gentlemen: Edward Fletcher, Esq., David Clark, Esq., William Crawford, Esq., G. G. de H. Larpent, Esq., and James Mackillop, Esq., having been read and discussed, it was resolved unanimously:

1st. That the time has arrived when it has become advisable that the opinions and views entertained by the East-India merchants and agents resident in London in relation to the inquiries now pending in both Houses of Parliament, as connected with a renewal of the Charter to the East-India Company, should be publicly declared.

2d. That it is the opinion of this meeting, from the experience obtained since the opening of the trade to the East-Indies, by the 53d of Geo. III., and subsequent Acts, that the manufacturing, shipping, and commercial interests of the United Kingdom have derived very important advantages therefrom.

3d. That this meeting confidently relies that, in any renewal of the Charter to the East-India Company, due provision will be made to allow such free intercourse of British subjects with India, and to give to them such right of settling therein as shall (consistently with the security of the British Government and the welfare of the native population) be best calculated to promote the full development of the internal resources of

that country, and, by the application of British skill and capital, improve its various products, especially those of sugar, cotton, silk, and tobacco; these being the principal means by which, in the opinion of this meeting, a further extension of the valuable trade with India, now obstructed by the difficulty of obtaining returns, may be facilitated.

4th. That, adverting to the fact of the Government of India having recently imposed a heavy and most vexatious burden on the commerce of that country, through the operation of the "Stamp Regulation," it is, in the opinion of this meeting, due to the commercial interests of India that the trade should be at once relieved from that Regulation, and protected against the imposition of any tax whatever by the local Government, without a fair opportunity being afforded to all parties affected thereby of canvassing its merits and provisions, and of submitting to the Government such objections as they may entertain to the measure previously to its acquiring the force of law.

* 5th. That it is the opinion of this meeting, and is supported by the personal experience of many of the members now present, that commercial dealings on the part of the Government of India, whether as merchants or manufacturers, are destructive of fair competition, and are in consequence calculated rather to depress than excite commercial enterprise through the countries subject to their dominion. It is therefore most important to the mercantile prosperity of India that the Government of that country should be entirely restricted from all commercial dealings, save and except, in reference to the export trade from India to Europe, it be absolutely necessary to buy produce in open market for the purpose of remittance in aid of the territorial demands on the London treasury, when no other means of supply can be obtained.

6th. Whilst this meeting expresses this opinion as to the bounds which should be set to the commercial interference of the government of India, it desires to be distinctly understood not to uphold the usefulness or necessity of even such limited transactions, believing, as it does, that the condition of India will, under a free and open competition of commerce, afford further proof to the experience furnished by all other countries in the world, that the work of remittance can be best performed by means of the industry, intelligence, and economy of merchants individually interested in the result of their undertakings.

7th. That this meeting refrains, at this time, from making any declaration on the important question of the monopoly in the supply of tea to this country now vested in the East-India Company, because, in the opinion of this meeting, that subject is interwoven with various other considerations besides those purely commercial, which render a full investigation indispensably necessary for establishing a fair and just decision as to the course which it may be wise to pursue in furtherance of the common interests of our country.

8th. But pending the consideration which is now giving to this most important object, this meeting cannot withhold the expression of its opinion, that the interests of British merchants, shipowners, and manufacturers, ought not to be any longer disregarded in relation to the commerce of China; nor the expression of its hope, that merchants of this country shall be no longer excluded from the exercise of their skill and the employment of their capital in a lucrative branch of the commerce of the world, open to all other nations of Europe and America, whilst the exclusion of the private merchants of the United Kingdom has, without producing any corresponding benefit to the East-India Company, had the direct effect of checking the general commerce of the country, and narrowing the consumption of its manufactures.

It was further resolved,

That the foregoing Resolutions be embodied in Petitions to the two Houses of Parliament respectively, and that the same be prepared for presentation with as little delay as possible.

R. C. BAZETT, Chairman.

IMPORTS.—Calcutta, Madras, and Bombay, 1830.—[The Value is official]

APPENDIX,
No. 4.

continued.

Trade with India
Answers to Queries.

	Into London.	Into Liverpool.	Total Quantity.	Total Value
Silk, London, Company's Bengal bales 6,980				
Private trade 1,282	8,262	49	8,311	790,600
Indigo chests	30,334	1,433	31,767	1,429,515
* Piece-goods, Silk and Cotton (supposed London)				215,000
Saltpetre bags	67,856	31,690	99,546	262,000
Sugar bags	87,531	33,631	121,162	201,936
Coffee bags	10,912	1,448	12,360	25,500
Rice bags	39,889	35,978	75,867	16,500
Cotton Wool bales	15,801	14,100	29,901	160,000
Lac-dye chests	1,568	561	2,129	50,000
Shellac chests	1,849	957	2,806	25,000
Safflower bales	632	659	1,291	22,589
Pepper bags	10,020	4,216	14,236	17,000
Castor Oil packages	1,811	577	2,388	3,600
Cassia Lignea chests	3,459	580	4,039	11,200
Bullion from Bengal, in dollars, rupees, &c.— Value in sicca rupees				
1830	1831	19,23,423		
July .. 3,89,521	Jan. .. 2,79,598			
Aug .. 6,55,046	Feb. .. 56,688			
Sept. .. 2,02,386	March .. 1,14,787			
Oct. .. 1,44,919	April .. 2,54,203	315,000		
Nov. .. 2,50,357	May .. 2,74,202			
Dec .. 2,81,194	June .. 2,53,959			
19,23,423	31,56,860			815,000
Bullion from other Presidencies, not known but supposed to be about }				
	500,000			

	Into London.	Into the Outports.	TOTAL.
Gums	£	£.	£
Arabic	630	840	1,470
Animi	1,300	—	1,300
Gamboge	300	60	360
Olibanum	3,500	150	3,650
Myrrh	1,400	—	1,400
Seneca	100	—	100
Assafoetida	30	—	30
Spices			
Cardamums	3,200	350	3,550
Cloves	350	260	610
Mace	200	—	200
Nutmegs	100	—	100
Ginger	1,000	—	1,000

APPENDIX,
No. 4.
continued.
Trade with India
Answers to Queries.

(continued.)

	Into London.	Into the Outports.	TOTAL.
	£.	£.	£.
Elephants' Teeth	18,000	6,000	24,000
Horns and Tips	2,000	2,000	4,000
Deer Horns	1,000	—	1,000
Hides	500	900	1,400
Skins	—	2,750	2,750
Galls	2,500	210	2,710
Tortoiseshell	2,000	—	2,000
Mother-o'-Pearl Shells	8,000	205	8,205
Tin	12,000	—	12,000
Tinical	3,375	4,000	7,375
Seed-lac	—	125	125
Senna	2,900	720	3,620
Aniseed	2,000	210	2,210
Munjeet	—	690	690
Arrow Root	—	800	800
Sago	—	200	200
Cassia Oil	—	100	100
Hemp and Jute	15,000	5,000	20,000
Coculus Indicus	400	—	400
Aloes	1,000	—	1,000
Rattans	—	500	500
Sapan Wood	—	715	715
Ebony	6,000	1,120	7,120
Teak Wood	—	300	300
Lignum Vitæ	—	900	900
Dates	—	10	10
Cigars	—	350	350
Wheat	—	500	500
Flour	—	35	35
Pickles	—	5	5
Coral	—	5	5
Coir Rope	4,800	1,300	6,100
Hawsers	—	150	150
*Silk piece-goods	—	4,500	4,500
Nankeens	—	100	100
Sundries not enumerated	25,359	500	25,859
TOTAL of Articles (other than Bullion) of which the Values, and not the Quantities, are stated for London and the Outports	117,944	36,560	154,504

Mr. Mackillop

There has been an increase in the annual imports from India since 1814. Indigo, for instance, the most valuable export from India, has increased since the above period fully one-quarter in quantity, though this will not appear by the returns of the trade to this country, as during the war very little was exported from India direct to the Continent, and consequently no comparison can be made with the direct trade to the Continent of Europe now existing. Prior to 1814, cotton piece-goods were shipped extensively to England from Bengal, and a considerable supply of raw cotton was also sent frequently from

from both Bengal and Bombay. The great increase which took place in the manufacture of cotton piece-goods in England, soon after the general peace, occasioned an unusually large supply of raw cotton to be brought from Bengal and Bombay for two or three years. At present, the import from the former place is small, owing to the superior quality and the low cost of the cotton grown in the United States of America, and with which Bengal cotton is not likely to compete successfully during a free intercourse with America. The import from Bombay (where the quality of the cotton is superior to that of Bengal) continues, but on a limited scale, with reference to the shipments of 1815, 1816, and 1817. The imports of raw silk have increased during the present Charter, but this article is chiefly in the hands of the East-India Company. The imports of saltpetre have also increased; and Bengal will probably continue to be the chief source of supply, the cost of production being low, and thereby enabled to compete with Peru, from which country some shipments have recently arrived. The imports of lac-dye, shell-lac, and various articles usually denominated drugs, have gone on increasing; and, as a general remark on this subject, I may observe, that at present, and for some time past, the trade has been decidedly profitless.

It is my opinion, that every means should be used to induce the Government of China to admit of our having a settlement on their coast similar to the Portuguese possession of Macao, or in some contiguous island, for the residence of British subjects, and as a safe depôt for goods. Between such a settlement and the Chinese there is every chance of an intercourse being speedily established, and an extensive trade carried on, unfettered by the system of monopoly existing on the part of the Chinese at Canton. This arrangement would probably afford the means of getting our manufactures introduced into various parts of China, which experience shows can only be done to a limited extent through Canton, unless some depôt of this kind can be established; and so long as our shipping have only access to the port of Canton, I see no reason to calculate on an early increase of our exports; the attempt would, in all probability, be attended with serious loss. While the import and export trade of China continue to be controlled, as at present, by the Hong, my belief is that tea, the principal import into England, ought to be more cheaply purchased at Canton, by only one party buying, than if they were a great many buyers in the market. It would, in fact, be one monopoly opposed to another; and I see no reason why a public body should not, as to freight and other charges, bring tea to this country as cheaply as could be done by individuals. It will be understood that this opinion is founded on the present state of our commercial intercourse with the Chinese. Tea is the only article the East-India Company export from China. The raw silk and other goods brought from that country are imported by individuals, either in the privilege tonnage of the Company's ships, or *via* Singapore.

It would obviously be to the advantage of exporters of goods from this country, were the duties reduced on the importation of Indian produce into England. I allude particularly to sugar, silk piece-goods, pepper, and almost every description of spices, &c. It is acting inconsistently to encourage the exports of a country, and at the same time to repress the importation of the productions of the state to which the exports are sent; it is, in fact, a system of trade not calculated to be beneficial to either party.

The circumstance of the Company having to pay a large sum annually in England out of their Indian revenue, tends to encourage the import of Indian produce into this country; but, on the other hand, it has the effect of discouraging the export of goods from this to that quarter, as the funds prepared by the Company for remittance to England come into competition with those arising from the proceeds of goods sent from this country, either in the purchase of goods or bullion for shipment to England, or bills of exchange, thereby rendering each of these media of remittance less favourable for those who require to send funds than would otherwise be the case. For several years great inconvenience and difficulty have been experienced in bringing home funds. Shipments of goods have been frequently attended with loss, and the consequence is, latterly bullion has been imported from the several Presidencies of India by individuals as well as by the Company. It is obvious,

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obvious, therefore, that the trade from India, in the present state of the European markets, cannot be increased with advantage, unless by encouragement to the import of such articles as are alluded to in my answer to the second Query.

I am not aware that any facilities can be given to encourage the increase of the trade from India beyond those I have already adverted to. The Governments of India ought to afford every encouragement for the production of exportable commodities at the lowest possible cost; for, as I have explained, very great difficulties exist in effecting remittances from India. To illustrate how this difficulty operates, I may observe that a great portion of the indigo, and also other articles imported during the last two years, have not realized here more than 1s. 3d. per rupee, while the mint value of that coin may be stated at 1s. 11½d.; and hence it is that individuals, as well as the Company, latterly have effected remittances by bringing home silver instead of goods. But this mode of remittance from India or China, if continued, must check the import of goods from this country; for as neither India nor China produce the precious metals, the withdrawing any considerable part of the currency of these countries will diminish their ability to make purchases, unless a supply be derived by them from other countries, which does not seem likely to happen as respects India; for North and South America and Persia, which formerly sent extensive supplies of bullion to India for the purchase of silk and cotton piece-goods, and more particularly the latter, are now supplied from England.

Manchester Cham-
ber of Commerce
and East-India
Committee.

The improvement and increase of the exportable productions of India would doubtless be a great good to India, and not to India merely, but to this country. The improvement in the quality of Indian cotton is an object of paramount importance to the prosperity of the cotton manufactures of Great Britain; so much so, that every facility should be afforded to the speedy development of whatever India is capable of accomplishing in this way;* but we have no specific measure to suggest, unless it be the obvious one of permitting British subjects to hold land. If injurious restrictions be removed, and latitude given for the natural operation of British capital, skill, and enterprise, in aid of the fertility of the soil of India, and the industrious habits and peaceable disposition of its inhabitants, every thing will be done that is requisite, and more certain and permanent improvement be made than could be calculated upon from any forced measures.

Glasgow Chamber
of Commerce

Every improvement or increase of the exportable productions of India would no doubt, have that effect; and, with a view effectually to promote such desirable objects, we earnestly hope that the license system by the East-India Company shall be entirely abolished, and every encouragement and facility, consistent with the safety and tranquillity of India, will be granted to British subjects going there, from whose skill, capital, and enterprise most beneficial results may reasonably be expected.

We shall briefly mention some other measures which we consider would greatly promote the interests of Indian commerce:—*vis.* 1st. The reduction of the duty on the importation of salt into India from this country. This article is strictly monopolized by the Company, as, though nominally allowed to be imported, the duty being three rupees per maund, or about £8. per ton, it is virtually prohibited; such a reduced rate of duty as would admit of the article being extensively imported into India would afford an equivalent to the Government for the profits of their present monopoly, and greatly promote and extend the Indian trade.

2d. The

* The estimated consumption of raw cotton in Great Britain in the year 1831 was not less than 260,000,000 lbs., of which the whole of the British colonies (India included) did not furnish more than 15,500,000 lbs.

2d. The utmost facility should be given to the inland trade of India by the abolition of all transit duties.

3d. A Government establishment of sailing packets or steam-boats betwixt India and Great Britain, for the more speedy and regular conveyance of letters and despatches between the two countries.

4th. It may not be out of place here to mention the very great benefit which Indian commerce would derive from a reduction in the duties on the importation of East-India products into this country, say on sugar, coffee, pepper, sago, dye-stuffs, and drugs. The trade in these articles might be greatly increased, to the mutual benefit of the people of India and of this country, were the import duties not so exorbitantly high. Wheat has of late become an article of import from India, and, on a moderate rate of duty, promises the double advantage of an additional security against scarcity at home, and of providing against an extreme depression of the rates of freight in India.

A practical illustration of the benefits to be expected from a reduction of duties is to be found in the article of rice, the importation of which has increased since the duty was lowered, to a very great extent.

We would in particular suggest that encouragement be given to men of talent, particularly acquainted with the best modes of raising and improving the different products of India, to settle in the interior of the country; that encouragement and protection be given to men of capital to invest their property in land by grants in perpetuity on easy terms; and that facilities be afforded for the establishment of a free intercourse between different parts of the country, by the construction of bridges and roads.

We would suggest that the present vexatious and expensive licensing system be abolished, and that persons engaged in trade be allowed to proceed to India, to reside there, to proceed to all parts of that country, without being subjected to further restraint than the carrying of a passport, or such other document as may serve to afford them protection, while it does not occasion any unnecessary expense or delay. That security of persons and property be afforded by a prompt and equal administration of justice in all parts of the country; and that the power at present possessed by the local governments, of ordering the summary expulsion of Europeans from India, be withdrawn.

That no new duties or taxes be imposed upon produce or property in India without the sanction first obtained of the British Parliament; and that such scale of import duties be adopted in this country, as shall place the products of India upon a footing approximating more nearly than at present to those of other British colonies; that all monopolies now held by the East-India Company be entirely abolished; and that, if they be allowed to retain the sovereignty of British India, they be prevented from engaging in any trade themselves, or from entering into any treaties or other engagements with native powers, of a nature calculated to repress or throw impediments in the way of commercial dealings between the natives of those countries and the British merchants in India; and lastly, we would suggest that, in connexion with the opening of the trade to China, a representative of the British nation, with powers emanating directly from the Crown, be appointed to reside in China for the protection of our commerce, in the room of the present objectionable system pursued in that country by the East-India Company.

The most important object now in the contemplation of the merchants and manufacturers of Great Britain is a free trade with China, and a perfectly free importation of tea on the expiration of the present Charter, permitting it to be brought from any ports in China, from Singapore, or even from foreign countries in British ships.

The manufacturers of the United Kingdom will in such case participate largely in the export of goods on their own account, for they can of course furnish them at the lowest rate; and the impediments so generally felt in our export to foreign countries, namely,

the

Liverpool East-
India Committee

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the want of returns, will in this case be provided against by the great extent to which the importation of tea will probably be carried; the advantages which Great Britain possesses for a free trade with China are so great, that it is highly probable this country would become the great mart for the supply of tea to the principal places in Europe and America.

By abolishing the present odious system of licenses, and allowing persons to proceed to all parts of India without any injurious and vexatious restraints;—by allowing the investment of property in land, and the establishment of settlers free from summary and arbitrary expulsion, the great object would be attained of securing the advantages of British skill and management in the culture of those products which now rank low in estimation, but would thereby be improved in their quality to the highest state of perfection, and extended to whatever the world may require.

The same degrading rule still continues in force against all British subjects settling in any place within the extent of the Company's dominions, except under their license and during their pleasure; and so jealous is the Company of commercial interference, that the natives are deterred from disposing of their products to private merchants, and the extension of commerce, beyond what the caprice and interest of the Company allow, discouraged; all private trade, therefore, must be placed in hands doubtful and objectionable; and in order still more to check or suspend such traffic, the transit duties are varied, and the trade in any articles suspended or declared free, as suits the interests and views of the Company in their capacity as merchants.

Since the Directors of the Company have been the monarchs of our vast possessions in India, no facilities of communication with the interior by roads have been afforded, nor has any improvement in the culture of its soil and its various products been made; with one solitary exception (the culture and manufacture of indigo), these valuable and extensive regions still continue under the ignorant and careless management of the natives, whom it has been the strange policy of the Company to keep in their original, degraded and idolatrous state. How widely different would the condition be of this important part of the globe, and its vast population, were the Company to confine themselves to their magisterial duties, and no longer act on the narrow principles of rival and monopolizing merchants. The advantages arising from such a change (the right of colonization being granted) would be incalculable, both to ourselves and the native inhabitants of India: to ourselves it would afford a most inviting opportunity for the investment of capital; be an inexhaustible source for the extension of our commerce and manufactures, and for the employment of our shipping; a source in these respects more highly important because free from foreign competition and control. It would afford inducements to the emigrant far beyond either Canada, the United States, or New Holland; and would greatly and permanently improve our national as well as individual prosperity. As to the natives of India, this change of system would tend, by their increased intercourse with Britons, to enlighten and civilize them, to dispel the horrors of their superstition and idolatry, and greatly to facilitate their improvement, general welfare, and happiness.

Mr Wood

In addition to a change in the system of allowing the produce of the Lower Provinces to be exported free of duty, canals of irrigation, and tanks may be executed whenever the outlay on such works is likely to be repaid; and it is little creditable to our Government that these works have been allowed to remain much in the same state as we found them, with exception to the canals in the Doab, and the Delhi canal, which have been recently opened. I was present at the opening of the latter, and witnessed the delight of every class of the population. I asked an old man if it afforded satisfaction to his countrymen? He replied, "Look around you, Sir; see the crowds that have come out

to

to see your great work; observe the women, who on this great occasion have been allowed to enjoy the sight, and expose their persons to the gaze of the public, a circumstance you are aware which is never allowed, and then judge of the satisfaction we experience." Roads and canals of communication may be made whenever their construction will facilitate the transport of the produce of districts not settled in perpetuity to a market, or whenever they will repay their cost; and there is no country which offers so many advantages for the construction of canals as the province of Bengal, from its being level. Very little has been effected by way of opening the communication with the Presidency by land, and the roads have been left in a much worse state than when under the government of the Moguls. The remains of their roads and bridges are to be seen throughout the country; and although we have been so long in possession of the country, the roads within thirty miles of Calcutta are impassable for carriages in the rainy season. It is probable that if the convicts were stationed on the line of the great routes of communication running through the country, and their labour directed by skilful officers of pioneers and engineers, that the construction of good paved roads might be effected at very little cost to the State, which would be the means of keeping the communication open by land at all seasons of the year; and my experience tells me, that the cost of constructing roads with such aid would not exceed 2,000 rupees a mile, if paved with brick, and nothing like the sum if other materials were procurable. As the revenues of the country must depend on the producers having at all times an unrestricted sale for the produce of their labours, it must be an object to ensure to the landholders of the districts a free market. The Government should only come into the markets for commissariat or other purposes on the same footing as the private merchant, and only purchase under contract for delivery *at the places of consumption*, and on no account interfere with the transport of the country by land or by water. If the transport of the country is not allowed to be interfered with by the commissariat and other government officers, and is left to the competition of private individuals unaided by the government officers, it will on most occasions be found ample to convey the supplies required for our armies, on much cheaper terms than they can be obtained through the medium of government cattle or government agents, whose zeal for the public service too often operates to their own disadvantage, and to the great detriment of the interest of private individuals and the Government.

When the private merchant, in times of scarcity, can make it answer his purpose to transport grain from the banks of the Indus to Calcutta, 1,500 miles, he can have no difficulty in supplying the wants of our armies, wherever they may be obliged to move, provided he is not molested in his arrangements, and there is sufficient competition amongst the natives to ensure the Government from loss from combination. The commissariat has, I fear, been established on the principle of making the Government independent of the public, and with this feeling it has been made too dependent on the civil power for its supplies in times of war and difficulty. If, on the contrary, it had been established on the principle of being quite dependent on public competition for its supplies, under contracts for delivery at the places of consumption, and the civil power had been directed to withhold its aid, it is probable that private individuals, with the aid of the country transport, would have supplied the wants of the Government much cheaper than they have been; and the landholder would have been benefited by obtaining a better market than he has had in times of difficulty, owing to the transport of the country being pressed for government purposes.

It may be asked if the labourer in India is placed on a par with the labourer of Europe. When works are going forward in India there is always great difficulty in procuring labourers, and the inhabitants of the hills and neighbouring states are enticed to quit their homes by wages which are insufficient to induce the labourer of our own districts to quit his village, and take the employment of the public. In India, within our own province, it may be said there is no distress, excepting in times of scarcity; and since we have resorted to the grain merchant the unrestricted sale of his grain, prices have adapted themselves

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themselves to the productiveness of the crops ; and there has been no scarcity or famine similar to what was known when the grain merchant was forced to sell his grain at whatever price the Government of the country was pleased to dictate. In India, the labourer of our provinces has no difficulty in maintaining himself and his family in independence, without resorting to the charity of the public, and we know the reverse to be the case in our native country.

I know of nothing that will so much aid the remittances required in England from India as lowering the duties in England on the import trade of Indian produce on all articles, and more particularly on articles produced in the colonies of European states for the consumption of Europe, such as sugar, silk, indigo, cotton, &c., so as to favour India. By such liberal policy towards our Eastern colonies, the trade of India will be increased, and the land will be brought into cultivation, from which the state derives its revenue.

Under the present system, Great Britain prohibits the Indian Government from raising a revenue through the customs on the principal articles of commerce exported from India to Great Britain, and makes India pay her an annual tribute to the amount of the duties she levies in England on the exports of India, amounting to £700,000, and forces foreign states to pay her a portion of the duty on the consumption of such of the Indian exports as are re-exported from England to the Continent. If the exports from India were liable to a duty in India, territory in this case would realize a revenue on all the products of India required for consumption in foreign Europe as well as in England. In addition to the duty levied on the importation of Indian products, England derives a revenue from the imports from China ; but as China is a foreign state, India suffers no loss by the arrangement ; but it may be worth considering whether there should not be a different scale of duty established for the importations from China and from our Indian territory, so as to favour the latter. If by any change in the system of conducting the Indian trade the price of its products could be reduced, the interests of the Indian cultivator or producer would suffer. A high price in India operates as a premium to industry, in the same way as a high price of corn in England ; and if the price of sugar, indigo, or cotton were to fall, it would cause the land producing the same to be thrown out of cultivation, or to be cultivated by some crop which would yield a greater return than the articles now cultivated for exportation. If the freight were reduced, and by any economy the imports from India could be conveyed in fewer ships, or if the present ships, by making their voyages within the year, would render fewer ships necessary, the shipping interest would be improved, and India might benefit by an enhancement of prices equal to the saving of freight ; but at the present prices it cannot be expected that more indigo, cotton, or sugar can be raised when the natives are at liberty to grow on their lands whatever they please, and are sufficiently alive to their own interests to grow whatever will yield them the best return. Great Britain, in addition to the tribute she makes India pay her through the customs, derives benefit from the savings of the service at the three Presidencies being spent in England instead of in India ; and in addition to these savings, which probably amount to near a million, she also derives benefit from the fortunes realized by the European mercantile community, which are all remitted to England.

Mr. Rickards

Private merchants carrying on trade between India and England, and in the interior of India, meet with many grievous obstructions, which are at variance, as I conceive, with the intentions of the Legislature, as expressed in the Act of 1813. In my several examinations before the East-India Committees in 1821, 1830, and 1831, I have enumerated these obstructions at considerable length. They may be reduced to the following heads :—

1. The forms and restrictions imposed by law on persons and ships proceeding to India ; all of which are as inapplicable to the Indian trade as to that with any other part of the world,

world, including the monstrous power of deporting European settlers without trial, or even reason assigned.

2. A power exercised beyond law by the Court of Directors, sanctioned by the Board of Control, in the licenses which private merchants are obliged to take out with penalty bonds attached, and the difficulty, delay, and expense of procuring the same. I have fully explained these processes in the evidence referred to in the margin.*

3. The mode adopted by the Company's Government and servants abroad in providing investments for the Company's ships, from provinces or from manufacturers, subject to their direct authority as rulers of the country. The arbitrary exercise of power in monopolizing produce, and compelling individual labour, is exemplified in the transactions referred to in the Minutes of Evidence of July 1831,† more fully detailed in Appendix 5, to a publication of mine entitled "Rickards' Speeches" in 1814, further confirmed in Lord Wellesley's well-known letter to the Madras Government of 19th July 1804, and been, I believe, the universal practice ever since.

4. The collection of transit and market duties on the internal trade of the country, the evil of which is greatly aggravated by the collection being entrusted to officers over whom all control is purely nominal, and who are supposed to collect to the full as much, if not more, for themselves, than that which they choose to return in their official accounts to the public treasury.

5. To these may be added, the taxes called in India *moturphu* or *teesabuddy*. These are personal or professional taxes laid on merchants, traders, manufacturers, craftsmen, houses, shops, looms, tools, instruments of labour and art, and even the implements of agriculture. The vexatiousness and oppression of this tax are greatly aggravated by its being imposed, not on the value of the article taxed, but on the supposed, *i. e.* arbitrarily computed, gains or profits of the payer. For a description of this tax, and the singular mode adopted for arriving at the supposed profits of merchants, &c., I beg leave to refer to my work on India, vol. 1, p. 496; the detail therein given being taken from official documents.

6. All the monopolies of India may likewise be enumerated as so many obstructions to fair commercial enterprise and dealing; such as the salt monopoly, the opium monopoly, the tobacco and liquor monopolies, with other articles either monopolized or so highly taxed as greatly to affect both the internal and external trade of the country.

The duties on many articles of East-India produce are also enormously high, apparently rated on no fixed principle, and without regard to market price. For example:—

Aloes, subject to a duty from	70 to 280	per cent.
Assafœtida	233 .. 622	...
Cardamums	150 .. 266	...
Coffee	105 .. 373	...
Pepper	266 .. 400	...
Sugar	94 .. 393	...
Tea	6 .. 100	...

These facts having been unnoticed throughout the present Charter, the East India houses of agency in London presented two memorials on the subject to the Lords Commissioners of His Majesty's Privy Council for Trade, in March 1831, praying for relief on both heads. To save the trouble of reference, a copy of both‡ memorials is annexed to this answer, in the hope that they may attract the attention of His Majesty's Government in the new arrangements about to be adopted for India. The rates of duty imposed on

* Vide Evidence before Committee of Foreign Trade in 1821, and before Select Committee in July 1831, Ans. 2772 et seq.

† Vide Evidence, July 1831, Ans. 2846, and the other Documents referred to.

‡ These memorials and enclosures have been already printed in the Minutes of Evidence, Session 1831 31, p. 150 to 155

on Indian imports into Britain, when compared with the exemption from duty of British staples into India (cotton goods being subject to a duty only of $2\frac{1}{2}$ per cent.), constitute an important feature in the present question. Indians within the Company's jurisdiction, like English, Scotch or Irish, are equally subjects of the British Government. To make invidious distinctions, favouring one class but oppressing another, all being subjects of the same empire, cannot be reconciled with the principles of justice; and whilst British imports into India are thus so highly favoured, I know that Indo-British subjects feel it a great grievance that their commodities when imported into England should be so enormously taxed.

Some modification has taken place of the custom-house duties in India, which the regulations of Government will shew; but as regards the system of duties on British goods imported into India, compared with those on Indian goods imported into Britain, both being equally the property of British subjects, it is liable to this inconsistency, that British staples imported into India are admitted duty free, whereas Indian produce is charged with enormous duties in this country, many articles of ordinary consumption being subject to duties exceeding 100, and from that up to 600 per cent., with one article as high as 3,000 per cent., besides other unjust restrictions which will be noticed in a subsequent answer.

But the greatest obstruction of all to the extension of Indian commerce, both internal and external, is the land-tax, *one-half of the gross produce of the soil*; an impost which paralyzes the energies of the great mass of the people by consigning them to irretrievable poverty; but this is far too wide a subject to be discussed here: I must therefore beg leave to refer to my late work on the revenue systems of India, where the evils of this tax, unavoidably aggravated by the mode of its collection, are fully detailed.

Had my health permitted, it was my intention to have closed my late work on India by a fifth part, to contain suggestions for a reform of the Indian administration, as regards the present system, both at home and abroad. I had reserved for this part some remarks on the inefficiency of the judicial system, and its total inapplicability to the state of society, civilization, and knowledge existing among the natives; their notions of justice; their local usages, traditions, or laws; together with its unsuitableness on the score of language, when considered in reference to the various dialects in use among the different inhabitants of our Indian provinces. Being compelled to abandon this portion of the work, perhaps I cannot do better than give, in reply to this question, a sketch or outline of what I originally intended to offer in greater detail; and, as a preliminary step to all others, I would recommend

The entire abolition of the Company's trade. The India trade is now admitted to be a losing one in the Company's hands; the China trade asserted to be profitable, and so it may be to a limited extent, but a trifling profit to a company is no excuse for continuing a monopoly injurious to the country at large. If, however, there be truth in the printed official accounts now before the public, I am quite sure that every impartial man acquainted with figures will be obliged to admit that these accounts exhibit no symptom of a real exclusive commercial capital for carrying on this trade; that to be continued, it must be supplied with funds from the territorial revenues of India; and that if the Company are allowed to supply themselves, as at present, from India, the same mischiefs as now experienced will inevitably be perpetuated.

The Company's trade being wholly abolished, I should then consider them the fittest organs in England for conducting the political administration of India, under certain modifications of the system to be hereafter noticed; and I would accordingly suggest, as regards India,

That the three presidencies of Calcutta, Madras, and Bombay be placed on the same footing under an executive government, consisting of a governor, commander of the forces, and one member of council, a civil servant:

That

That the civil and military servants of the Company be attached to and promoted at each presidency respectively as at present; but that all allowances, civil and military, be every where equalized.

That His Majesty's courts of justice at the respective presidencies be maintained, as at present, quite independent of the local governments, but with the jurisdiction of each court clearly and expressly defined; and whether the limits of that jurisdiction be or be not enlarged, that it be relieved from all those doubts and difficulties which not unfrequently attend its powers of cognizance and the execution of its decrees.

That a central government-general be established for all India, to consist of a governor-general or viceroy with suitable rank, a commander-in-chief, and two civil servants, as members of council, with general powers of control over the inferior governments.

That all the current details of the civil and military business of each presidency be conducted by the local executive government of each, with the exception of matters of a political or diplomatic nature, all of which should be considered as exclusively appertaining to the government-general.

The inefficiency of our revenue, judicial, and police regulations being now generally admitted, I would propose that a legislative council of learned natives be assembled at each presidency, to consist of a deputy freely chosen from each zillah; and that to this legislative council be committed the duty of revising existing regulations, and of thereon framing a code of laws suited to the habits, local usages, and institutions of the different classes at each presidency, together with a more efficient system for the administration of such laws in the Mofussil; and that each regulation or law, when settled by the legislative council, should be handed up to the governor in council of the presidency, to be duly considered by that board; and when approved by the governor in council, to be forwarded for the final decision or confirmation of the government-general.

The legislative council may, in its earliest stages at least, be aided by an European president, and by European secretaries and translators, to record and set in order its deliberations, so that the same may be submitted in due form to the governor in council, and ultimately to the government-general; and this aid or addition to the legislative council may be continued as long as the same shall be found useful or necessary.

That the more respectable and well-informed of the natives of India be also employed in high and responsible offices in the judicial, revenue, and police departments, with suitable allowances attached to each office, and likewise be eligible to sit on all juries. The proceedings of these native functionaries might be made subject to the inspection or revision of European superiors, who would report thereon to the higher authorities; and it is conceived this duty might be performed by collectors, judges, and registrars, making periodical circuits within certain divisions or limits, if by the proposed employment or substitution of natives, those officers were relieved, as they might be, from the details which they are now obliged personally to attend to. If confined to the purposes of general superintendence and revision, the number of those superior officers would, it is probable, be less than are at present employed, and the heavy expense of those establishments be proportionably reduced.

That provincial courts of appeal be continued as at present, but to consist of two European and one Native judge.

That a further appeal from the provincial courts do lie to a superior court of appeal, at the seat of the government-general; that this superior court do consist of a lord chief judge or chancellor with a noble title, another professional puisne judge, the two civil members of council, and a native judge; and that appeals to this higher court, whether from the King's courts at the presidency or from the Mofussil, be in all cases final.

That to aid the government-general in their deliberations on the laws necessary to be enacted for the government of our Indian provinces, there be established at the seat of the

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the government-general a superior native council, consisting of three members, one from each presidency, to whom every law handed up for consideration or confirmation be in the first instance submitted, and who will report thereon for the final decision of the government-general; and that a law or regulation thus confirmed be, on promulgation, considered as in full force. Even if altered or modified on subsequent reference to England, it need not interfere with its being immediately acted upon in India.

I would also propose that one of the three Native councillors above mentioned be selected to sit as junior judge in the superior court of appeal.

As regards England, I would submit that, as the present Board of Commissioners for the Affairs of India is at present constituted, a cumbrous body containing several useless members, this body be reduced, and replaced by the appointment of a secretary of state for India, with a suitable establishment, and power of control over the proceedings of the Court of Directors.

That the Court of Directors be reduced to fourteen members, including chairman and deputy-chairman; and that this body be divided into three committees, one for the business of each Indian presidency respectively, and a superior committee, to communicate directly with the government-general of India, and to have controlling power over the inferior committees; the whole to be regulated as follows:—

Bombay committee	...	...	...	3 directors
Madras ditto	...	...	...	3 ditto.
Bengal ditto	...	...	...	3 ditto.
Superior committee, to include chairman and deputy chairman, total	...	...	...	5 ditto.

That the members of the junior committee (say Bombay) do succeed by seniority, as vacancies occur, to seats in the Madras, Bengal, and ultimately the superior committee; and that a member from the superior be always chairman of the inferior committees. The members of the inferior committees would thus attain a general acquaintance with the affairs of India before rising to the superior committee. A link of connection would be established between the superior and inferior committees, sufficient for all the purposes of information and control; and a better and a simpler link through a secretary of state (than at present exists) between the Directors and His Majesty's Government.

But the best, and in my opinion the only effectual check over the exercise of power, being publicity, or public opinion, I would further recommend that facilities be granted to admit of all important questions regarding India, whether affecting individuals or the public generally, being brought before a Court of Proprietors for public examination and debate; and that all such questions (including the laws or regulations enacted for India) be as fully and freely debated, and papers and documents for the elucidation of each subject as readily furnished, as now takes place in the proceedings of both Houses of Parliament.

And on the great question of patronage, that it remain where it now is, in the hands of the Directors.

This is a brief outline of my views on the subject of reform. To fill up the details of the plan could not be done, even if health permitted, within the limits of an answer to queries. But if the outline, or any part of it, shall be found to merit attention, the details, it is conceived, may be easily filled in, or the plan itself modified, if the principle be approved; for the plan is in fact rather a modification than a change of existing institutions, and therefore presenting no difficulties that might not be easily overcome.

The advantages likely to flow from the adoption of this plan are conceived to be the following, *viz.*

By the entire abolition of the Company's trade with India and China, and leaving the whole Eastern trade to be carried on in future by the skilful management and enterprise of

of individual merchants, free of all restraint, we have every assurance which experience ever since 1814 can afford that this trade is capable of further *indefinite extension*. One great obstacle to its further extension, under existing circumstances, is the difficulty of making profitable remittances from India to Britain, and this arises from two causes, one is, * the interference of the Company's agents in the purchase or production of Indian articles suited to the British market, by which their cost abroad is, as before explained, unnaturally raised, to the great injury and sometimes ruin of those who embark therein; and the other † is the monopoly of the China trade, by which the merchants of India are not only precluded from enjoying all the advantages which would result from a free intercourse between India and China, but they are also shut out of an advantageous channel of remittance to England, which would most assuredly be open to them if this branch of Eastern trade were left, as it ought to be, free of all interference and obstruction. The facilities and conveniences which Indian and British merchants could in such case contribute in aid of each other's operations, would, in my opinion, be so decided and exclusive, as in all probability to secure the whole or the greater part of this trade in their own hands, to the exclusion of foreign rivals, without the needless intervention of a single restrictive enactment, and thereby verify, as I also firmly believe, the prediction of Dr. Adam Smith, when he asserted, that "the East-Indies offered a market for the manufactures of Europe greater and more extensive than both Europe and America put together."

It may next be observed, as regards the political modifications above suggested, that there are two ways of governing distant possessions inhabited by a race or races essentially different in caste, in manners, in religion and social institutions from the conquering or ruling power; the one is by the power of the sword, and the other by allowing the conquered to participate largely (under due control) in the immediate government of themselves. By the latter method, reasonable expectations may be entertained of a people (particularly if conscious of their own inferiority) being so satisfied, as to lead to the establishment between them and their governors of real attachment, and consequently of a solid, contented, and durable union. But a government of the sword is a government of arbitrary power, and arbitrary power ever has been, and ever will be, a government of headstrong will and caprice, fraught in its exercise with oppression and wrong, with frequent acts of violence, and more frequent acts of injustice. In such a state of things, no real attachment, or bond of cordial union, can possibly subsist between those who rule and those who are compelled to submit. The sword may hold its sway over nations (as we see in many parts of Europe as well as of Asia), where the human mind, still mired in ignorance and superstition, has scarcely made a step in advance beyond the mere instincts of animal nature, or can fancy any earthly good or benefit worth pursuing at the expense of its indolence and ease; all under such circumstances is consequently stationary, and the sword rules undisturbed. But where moral improvement, and a greedy thirst of knowledge have struck their roots deeply into the hearts of an acute people, arbitrary power may from that moment count the days of its wane. A far mightier power, by a slow and almost imperceptible progress, prepares its inevitable downfall. It may triumph for a season, and add victory upon victory to its former glories, but its fate is nevertheless sealed; and as "he that lives by the sword shall perish by the sword," so may we conclude it to be sooner or later the expiring scene of every existing military government.

These remarks are here submitted under the same impressions which induced a similar train of reasoning in my late work on India, viz. the conviction of their being peculiarly applicable to the present state of our Eastern Possessions, and consequently deserving of serious consideration; but whether this belief be concurred in by others or not, I presume there will now be no difference as to the policy as well as the necessity of employing natives far more extensively than has hitherto been the case in the local administration of India. When this idea was first broached by me in 1813, it was pronounced to be visionary;

* Vide answer to fourth query.

† Vide evidence

visionary; now, as the public printed records show, including the evidence taken in the last two years before Committees of the Houses of Parliament, there is scarcely a servant of any eminence in or out of India who does not warmly recommend its adoption. The necessity of the measure will be more apparent, if reference be had to the history of British India from the year 1765, and to the four folio volumes of Revenue and Judicial Selections, published of late years by order of the Court of Directors; for it will be seen throughout, that owing to the inapplicability of our systems, the unsuitableness of our European ideas to the state and institutions of Indian society, the inefficiency of our control in all matters of detail, our ignorance of the nature of tenures, our errors in respect to ancient rights, projects and schemes of every variety have been tried, modified, abandoned, or repealed, and regulation on regulation enacted, all framed with the best intentions, and more especially to protect the rights and interests of the ryots, but all, it must be admitted, complete failures. Hitherto, moreover, the English in India have carried themselves so haughtily, so much in the spirit of proud superiors ruling submissive slaves, as never to have been able to possess themselves of that pervading influence which, penetrating through all ranks and grades of a community, is quite indispensable to the efficacy of the best laws; an ill-judged hauteur and distance, which has necessarily thrown this pervading influence into the hands of subordinate native agents, to be exercised by them underhandedly, and consequently in practices of the most flagrant corruption and abuse.

Another great advantage may be anticipated from this modified reform of our institutions abroad, and that is an immense saving of expense, as regards our Civil Establishments. There are now before the public printed lists of these establishments, and statements of annual expenditure at the different Presidencies in India, the aggregate amount of which is equal (surprising to relate!) to the whole of our military disbursements.* If, therefore, any one would take the trouble of placing these lists or statements in juxtaposition with any other which might be framed on the principles above suggested, of reducing the three Presidencies in India to the same level, abolishing the whole of the Company's commercial establishments and substituting respectable Natives for Europeans in a great variety of employments, he may easily convince himself that the present amount of Indian revenue would yield a surplus far beyond anything yet contemplated; probably sufficient, after defraying all other expenses, not only to pay the interest of, but eventually to redeem that debt which, however unjustly, has, by various Acts of Parliament been legalized as a territorial charge.

But a signal benefit will be conferred on the inhabitants of India by having justice administered at their doors: in which I include the establishment, as above mentioned, of a local court of *final* appeal, instead of appealing, as at present, to the King in Council in this country. The delay of appeals to England, a distance of 16,000 or 18,000 miles from the original source of action, is most vexatious and oppressive; the expense attending it ruinous, and the final decision submitted to judges wholly ignorant (more especially as regards matters of caste, religion, property, rights of inheritance, &c. &c.) of the laws, usages, and local institutions of India. Suppose a case, too, where further information

* Vide Annual Accounts laid before Parliament which contain Statements of the Ordinary and Extraordinary Receipts and Disbursements of India in each year. The only document I have at hand to refer to is No. 4 of Accounts and Papers appended to the Third Report of the Select Committee of the House of Commons, in which the Military Charges of India for 1829-30 are stated to be £ 9,103,091
And the Civil Charges 9,785,611

Total £ 18,888,702

A reference, however, to the other accounts will I am confident confirm this fact, and this I take to be a matter of so much importance as to require the strictest examination and scrutiny at the present juncture.

The civil charges above mentioned are only ordinary disbursements, and do not include payments either for interest or principal of Indian Debt, advances to the Commercial Department, with various other items, which are classed under the head of "Extraordinary Disbursements."

information or the ascertainment of a particular fact might be desirable before a satisfactory judgment could be passed, additional years must pass away before the required information could be obtained. In fact, I have known so much injury, intolerable vexation, and overwhelming expense, incurred by rightful suitors or appellants in cases of this description, that I cannot too strongly recommend it to the consideration of the supreme authorities in England. To a court of final appeal so constituted as that above recommended, there can, I presume, be no objection to appeals from the King's Courts at the different presidencies, since all such will be decided by regularly educated judges, selected from the most eminent of the profession in England; whilst in causes from the Provincial Courts of India the Superior Court will have the aid of associates well versed in Indian usages and laws.

But as regards the King's Courts in India, it might greatly conduce to future concord, and good understanding in the general administration of our judicial system, if the jurisdiction of the King's Courts were now to be clearly and explicitly defined. In settling this important point, the opinions of the King's Judges, which have been fully given and are recorded in one of the Appendices to a late Report of the Select Committee of the House of Commons,* together with other papers on the same subject, may be consulted with great advantage; so that with the aid of these valuable documents, I should conceive a line might be drawn which should not only harmonize with the concurrent jurisdiction of the Country Courts, but preserve unimpaired that independence of His Majesty's Courts, which long experience of their influence and powers has proved to be fraught with many important local benefits.

Finally, the establishment of a Native Legislative Council at the respective presidencies affords, I apprehend, the only chance of a code of laws being framed for India suited to the general state and character of the natives, and to the different usages, prevailing customs or traditions, which will be found greatly to vary in various parts; whilst a Committee from each Legislative Council might have its sittings permanent, to watch over the operation and effect of existing laws, and to submit to the Council from time to time such modifications, alterations, or repeal thereof, as circumstances should appear to render advisable: thus providing, as I conceive, not only the most likely means of compiling a code of laws suited to our Eastern possessions, but the best checks that can be devised for a due administration thereof.

I am aware that the highest authorities in India have recommended a different description of legislative council, to consist of the members of Government and of the Judges of the Supreme Courts at the different presidencies. I hope it will not be considered as betraying a want of proper respect in me, if I presume to dissent from these opinions. My own is decidedly adverse to the employment of judges, or practical lawyers, in the business of legislation; the objections to it are in my mind altogether insurmountable; but in India more especially, where European ideas, forms, and technicalities have already produced so much disappointment, I should anticipate nothing but a repetition of past results; in other words, a code of regulations failing in almost every instance to accomplish their professed object. The only plausible reason that I recollect (for I have not the record here to refer to) to have been advanced for the employment of the Judges, is to guard against the enactment of regulations in India at variance with the primary laws of the United Kingdom, or perhaps affecting the rights of the Crown; but this objection is easily met by causing all regulations to be registered in the Supreme Court, at the seat of the Government-general, with power to the said Court to reject such as may contain any such incongruities or violations; or they might be submitted in the first instance to the inspection of the Lord Chief Justice and Puisne Judge, previous to their being finally passed, and promulgated by the Supreme Government. A principal advantage of the plan I have suggested I take to be that of having a permanent legislative committee to watch

* Vide Appendix, No. 5 of 1831.

watch over the operation of existing laws or regulations, that is, to review, alter, modify or amend, as circumstances shall appear to require. This cannot be expected from a Legislative Council, consisting of the members of Government and the Judges of the Supreme Courts, whose peculiar duties and avocations are far too numerous and weighty to admit of undivided, or even the necessary attention to this *most important object*, whilst, of the Judges in particular, I trust it will not be thought derogating from the respect justly due to their high station and character to say, that it can hardly be expected of persons but imperfectly acquainted with the habits, usages, and local institutions of the Mofussil, that they would be so ready as might be desired in cases of inapplicable or inefficient laws, to alter or amend what, after due deliberation, they had once recommended or confirmed.

Should these reforms be found to conduce to the internal prosperity of India, the objects desired in this question would be most fully accomplished; for by increased prosperity on the one hand, and the entire abolition of the Company's trade on the other, the most effectual measures, as well direct as indirect, would thus be adopted, to advance the interests of Indian commerce, and not only to increase the exportable productions of India, but those of Britain also.

Mr Langton

The measures calculated to promote the general interests of commerce are too many and too important for me to do more than briefly advert to a few of those which appear to me the most prominent.

Encouragement and protection to Europeans possessed of property (or without property, where well recommended, and no misconduct alleged), to settle in India, with security to their persons and property.

Abolition of all transit and internal duties.

Cessation of all competition of the executive government with individuals; or of agents of the Company, or of Government, trading with superior privileges.

The introduction of an uniform and unvaried currency.

The removal, wherever practicable, of all restraints on the exercise of lawful industry, of which in India as elsewhere there are only too many, but nowhere more than in India.

The abandonment of monopolies. The revenue arising from that of salt might be supplied by a tax on the commodity; and it may be worth observing, that, as an article consumed by the numerous classes, when the price is not too high, as largely as by the rich, no other affords so fair a prospect of increasing revenue, by keeping the cost to the consumer moderate. Substitutes for the revenue from opium may no doubt be found. And, generally, every measure that tends to the amelioration of the situation of the natives.

Were the East-India Company to cease to carry on trade, the aid to the Indian finances, from the surplus profits and from the Board's rates, would of course cease with the trade; but there are strong grounds for supposing that the development of the resources of India has been checked by the system of the East-India Company's monopolies to an extent for which the aid in question has been but a poor compensation.

The source of this aid is solely the tea monopoly, and a direct tax for this object would draw far less from the British public than what must be paid in an extravagant profit to the Company to afford the same amount of aid; but there is every reason to hope that the improvement of the country, by the application of British capital and industry, economy, by the employment of Hindoos, &c. and other measures for the amelioration of the condition of the natives, which are now confidently looked forward to, will secure for India advantages far more than equivalent for those which may be sacrificed by the alteration.

Augmenting

Augmenting the surplus produce of the country should be done, first, by every practicable measure directly tending to its prosperity; secondly, by economy in its public expenditure; and thirdly, by assistance in its foreign trade. It is contrary to the last of these three branches of policy to favour by our laws the export to India of articles with which she is able to supply herself, or to discourage the export from India of articles with which she is able to supply other countries. We have in a great measure succeeded in supplanting her cotton manufactures by those of England. I understand that the practicability of supplying her with salt from Liverpool is under consideration. We exclude East-India sugar from the English market by means of high duties. If, in addition to all these disadvantages, any change of system were materially to diminish the tea trade from China to England, by means of which China is enabled to pay for the opium and cotton which she imports from India, it is probable that the demand for those articles would be proportionally reduced, and India would then be disabled from paying its tribute to England.

The principle of this contract for realizing the investment is, I believe, the same as is followed in England, and surely there is no just cause for complaint. The manufacture and sale of salt is certainly a monopoly, as well was that of saltpetre when it was manufactured on the Company's account; but I believe this last has been discontinued some time. I may here observe that the trade of Southern India will never be very great until the Pass at Paumbum shall have been opened sufficiently to admit the passing of larger vessels than the country craft of India, and also until the range of rocks called Adam's Bridge, which crosses from Ramisserum to the small island of Manar on the opposite coast of Ceylon, is sufficiently removed to admit of large vessels, when this is done, and the current, which is very strong, allowed to have a free vent, the mud bank that has been forming for many years at Point Calymere, in the Tanjour country, will be swept away, the depth of water will then be sufficient to admit of Indiamen to have free ingress and egress into the Bay of Tondy, a safe anchorage, and no fear of being driven on a lee shore, coral rocks, or sandbanks, and further of the utmost consequence to trade, as ships that are bound from the Bay of Bengal to Bombay, and *vice versa*, in either monsoon will have a short and safe passage.

Mr. Sullivan

The annual tribute drawn from India by the payment of territorial disbursements made at home, and the annual remittance of private fortunes, require unremitting endeavours to improve the productive powers of that country; facilities of remittance can thus alone be created. As the Government is now carried on through the Company, a facility for remittance might be afforded by permitting the resources of India to subserve more extensively in the provision of the China investment; this facility, however, could alone be obtained by a sacrifice of the export to China from England of British manufactures.

Mr. Lloyd

Large as the increase of trade has been, I have no hesitation in recording my sincere conviction, that under the application of a different system to the internal resources of India, and with a reduction in the duties on her raw produce here, and other alterations more particularly alluded to in * two letters addressed by the merchants of London interested in the India trade, to the Lords Commissioners of His Majesty's Privy Council for Trade, dated the 8th and 31st March 1831, that increase would have been much more considerable. The anticipated obstacles to any extension of the commerce between the two countries, "from the simple habits, the limited wants, and religious prejudices of the natives," have

Mr. Bracken

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continued

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have proved "airy nothings;" evincing either a lamentable deficiency of observation, or a deliberate intention to deceive the British nation for obvious purposes. I trust we shall not fail to profit by the past, and to scrutinize with due suspicion evidence on such matters proceeding from similar sources. We may be assured that, in buying and selling, human nature is the same in Cawnpore as it is in Cheapside.

The first step to an improvement in the quality of Indian produce must be an entire change from the restrictive to the protecting policy in regard to the resort to and residence of Europeans in India. Skill, capital, and enterprise should be invited with the utmost possible encouragement, instead of being checked by various regulations more or less repulsive. The power of transmission, unless by the sentence of the Supreme Court, should cease. The press should be entirely free; as free as in England. The institutions of the Supreme Court, divested of mere technicalities and modified by local usages, should be extended as far as practicable: and a code of laws, securing equal justice to all creeds and colours, but based on the principle of *elevating the Native* and not *depressing the European*, should be introduced into the Mofussil with all practicable dispatch. The existing judicial machinery, with some alterations and additions, might be adapted to the object in view.

Unless European settlers be thus protected, I dare not to predict any very favourable results to India or to England, by merely allowing them to proceed and reside there, with no greater facility and security than at present. So long as a liberal and enlightened policy, like that of Lord Wm. Bentinck's, exists, there may be no practical inconvenience; but his successor might be very different. The same act which was held indifferent by one Governor-general, or praise-worthy by another, might be thought criminal and dangerous by a third. It must not, therefore, be individual opinion, but the verdict of a jury which should determine such matters, if security of person and property be thought desirable. It is no argument to assert that comparatively few have been transmitted and ruined under the present system, and therefore it is not so very bad. How many abuses, and corruptions, and delinquencies have been known and suffered from the fear that urgent remonstrances might lead to total ruin!

The settler being placed in person and property under the protection of the law, and also subject to it, with equal facility in the Mofussil as in Calcutta, I am of opinion that an improvement would soon appear in the quality of the great staple productions of India, and by that improvement, accompanied with reduced duties here, particularly on sugar, the commercial relations of the two countries would be greatly increased. But an improvement more worthy of the British Government would follow—an improvement in the morals, habits, and intelligence of the people. I believe nothing will tend more to this object than the intercourse and example of respectable settlers; and such only, in the nature of things, could maintain a footing in the country. The objections, on an assumed invasion and colonization of starving European labourers, to the removal of the existing restrictions are idle. No reasonable man, acquainted with the climate and wages of India, indulged the expectation of a labouring class being able to exist, supposing even they could pay their passage out; and these physical obstacles existing, it seemed an absurdity almost to enact legal ones. This is not the class wanted, but all above it—the artisan, the engineer, the surveyor, the small farmer, the man of skill and science, and the man who possesses, or by his industry creates capital.

Mr Crawford

A full reply to this Question would lead me into a wider field than there is room for within the compass of a letter. I shall generally observe on this subject, that if the Government fulfil its duties, that is, secure an equal and efficient administration of justice, and forbear from imposing burdensome imposts, or throwing needless impediments in the way of private adventure and the free investment of capital, it may very safely and confidently leave every thing else to individual skill and competition. This country is rich in both,
and

and India is a fair and legitimate field for their exercise. It has not heretofore been the policy of the Government of this country to encourage the resort of British capital and enterprise to India, but on the contrary, to fetter and restrain them in a manner equally prejudicial to the interests of England and of India. Three great and beneficial measures have been carried into effect by the British Government since the first acquisition of our territorial possessions, now near seventy years ago, and I am not aware of any other deserving this name, or which has produced any solid or lasting advantage. These, and they did not form part of the system on which the affairs of India had been administered, but were imposed upon it by public opinion and the interference of the Legislature, are the institution of King's courts with independent judges at the capitals; the fixing the land-tax in perpetuity in some of the most valuable of the provinces; and the opening of the trade with Great Britain in 1813. To these I think may easily be traced almost every valuable improvement which has taken place in the condition of India since its conquest; and I may add, that there is not one advantage originally anticipated from them that has not been more than fully realized. I shall touch slightly on one or two of the most prominent advantages which have resulted from them. The land worth nothing, or little or nothing, to the proprietor, has in less than forty years come to be worth from sixteen to twenty years' purchase; the present rental equalling or exceeding the original tax, computed at the exorbitant rate of 10-11ths of half the value of the gross produce of the soil. The public revenue within the same period has advanced from about four millions and a-half to nine millions sterling. In almost every other part of India, except the territory in which the land-tax has been fixed in perpetuity, land is worth nothing, or next to nothing, and the public revenue has very generally declined instead of advancing. The great staple of indigo has been called into existence nearly within the same period. The annual produce of this is about 9,000,000 of pounds weight, and the value of the exports from Calcutta not less than £3,000,000, being in this single article, therefore, twice as much as the total exports and imports of the East-India Company at the same place before the opening of the trade.*

I shall barely enumerate a few of the commodities for the production of which the soil and climate of India seem best fitted, and which appear most likely to reward the application of capital and skill. These are opium, raw silk, indigo, cotton, tobacco, coffee, tea, cocoa, sugar, rice, dyeing drugs, coals, salt, saltpetre, and barilla. Many others might be pointed out, and indeed it would be rash to assign any limits to the list, after what has been already effected under very unfavourable circumstances. In illustration of this last point, I shall refer to two products now used to a considerable extent in the manufactures of Great Britain. These are lac-dye and shell-lac; the first at least a discovery originating in British ingenuity.

It is only necessary to cast the eye over a common London price-current to be satisfied of the general inferiority of the commercial products of India, clearly originating in the rude and imperfect agricultural and manufacturing processes by which they are prepared. When the capital invested costs the miserable peasant who prepares them from twenty-four to sixty per cent. under the name of interest, no other result could be reasonably expected. India, with very partial exceptions, may be described as a country without enclosures, roads, bridges, or navigable canals. Even its artificial irrigation, upon which the very existence of the people depends, is in a most rude and imperfect state. One strong fact will place this last assertion beyond the reach of controversy. Throughout India, the largest source of the public revenue is the land-tax; and yet over a territory exceeding half a million of square miles in extent, the annual expenditure of the British Government, in the construction of new or repair of old works of irrigation, does not exceed £70,000. I do not ascribe it as matter of blame to the existing government that it expends no more. The blame lies in its obstructing the application of private capital, and attempting that which is beyond the reach of any government, what no government, and especially a needy government, has ever

* Total Exports and Imports of the East-India Company at Calcutta in 1813-14, *Sa. No.* 1,52,87,220—Wilson's *External Commerce of Bengal*, tables, p. 16.

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ever done well, but what the resources of private enterprise has never failed to accomplish when free and unobstructed

One of the greatest inconveniences which the commerce of India sustains, arises from the absence of substantial banking-houses, and of a good paper currency. The greater part of the transactions of India are conducted in a metallic currency, the counting, guarding, and transport of which are, both to the state and to private individuals, sources of much loss, delay, and inconvenience. No treasure can, from the insecurity of the roads, be transported from one part of the country to another, without either a public or private escort. A return for a few years of the whole charges incurred for the transport of treasure on the part of the Government, would afford the most satisfactory data for judging of the extent of the inconvenience sustained from the want of a well-regulated paper currency.

The effect of the duty imposed upon salt has been to deprive the landholders, manufacturers, and merchants of England of a wide market for a staple article, to deprive the inhabitants of India of a cheap and wholesome necessary, which their own soil and industry are incapable of producing; and in my opinion its operation has also been to depreciate an available resource of the public revenue. With respect to opium, the effect has scarcely been less prejudicial. No drawback being allowed on this article on re-exportation from a British possession, the duty is strictly a prohibitory one, and therefore a virtual departure from the principle of open trade, declared and intended to be secured by the provisions of the statute. Indian consumption of foreign opium is wholly out of the question, and no direct communication with China, the principal mart, being permitted to British merchants, the trade has consequently been almost entirely thrown into foreign hands, and is conducted for the most part from foreign ports. In fact, the Americans and Portuguese may be said to enjoy nearly an entire monopoly of the supply of China and the Eastern Islands with all opium not the produce of the British territories in India, and the sole value of which cannot well be estimated at a less sum than one million sterling per annum.

Another regulation of the Indian Government, injurious to trade, may be stated—the law imposing stamps on all commercial instruments, in 1827, at Calcutta, and which being deemed either illegal or impolitic at Madras and Bombay is not in operation at these presidencies, nor at Singapore, Prince of Wales' Island, and Malacca, or indeed in any other British port in India, down to the present day. The tax, therefore, is a partial one, imposed at the busiest and greatest commercial mart in India, and there alone. The European and Native inhabitants of Calcutta petitioned both Houses of Parliament against the impost, as being both impolitic and unconstitutional, and the results, in a financial point of view, do not, as far as the public accounts show, appear to be such as to have warranted so obnoxious a measure; for the net stamp revenue of the Lower Provinces for 1827-28, when the tax was in operation, exceeded that of the previous year, when it was not in existence, by a sum of no more than £5,000. Later accounts, which I have not seen, may probably exhibit a somewhat more favourable result; but none, I am convinced, which can be a sufficient justification for the imposition of an unpopular tax, repugnant to the manners of the people of India, and, considering all the local circumstances of Indian society, burthensome to commercial intercourse.

The restraints imposed on the resort of British merchants to India, continue in law exactly what they were in 1814, and whatever relaxation may have taken place in practice, appears to have resulted from the force of public opinion, and not to have originated in the act of any public authority; for it appears that, by law or compact, the East-India Company are considered fully vested with the rights of resisting the recommendations of both Parliamentary Committees and the India Board to make any change, and they have fully acted on it. The amount taken at the India House as fees for granting licenses to private individuals, or in the shape of stamp duties which are incident to the covenants demanded, amounted, in the fourteen years ending with 1830-31, to very nearly £40,000 sterling. The penalty bonds demanded from the same parties amounted, from 1814-15 to 1830-31, to £2,514,500 for breaches of which it does not appear that a single prosecution has been instituted.

I may safely pronounce, that all the restraints and distinctions now enumerated are not only highly unjust and vexatious, but uncalled for by any public necessity whatsoever. The Court of Directors of the East-India Company have, I believe, urged the necessity of their continuance as a measure necessary to the security and good government of the British possessions in India; but in the present state of public information, few will be found to support them in this opinion.

The duty on Indian barilla, estimated *ad valorem*, is from thirty to forty per cent., on shell-lac, twenty per cent.; on sal-ammoniac, from forty to fifty per cent.; on turmeric, from fifteen to twenty per cent.; and on borax, one hundred per cent.; although all these articles enter largely into several of our manufactures. On medicinal drugs, as I conceive most unwisely, and I must add unjustly, the duties are exorbitant, and at the same time unproductive, ranging from 150 to 400, 500, and even 600 per cent., as in the examples of gum-ammoniac, common rhubarb, and assafoetida. Even in respect to articles now deemed necessities or comforts among the mass of the people, the duties are extravagantly high. Black pepper, for example, whether the produce of a British possession or not, pays an *ad valorem* duty of from 270 to 400 per cent. Cloves, always a production of foreign settlements, pay at the same time, although more in the character of a luxury, from 170 to 240 per cent. only. The cheap article of cassia pays from eighty to one hundred per cent., while cinnamon, a luxury, pays only from five to six per cent. Sago is perhaps a more striking example than any of these. Since 1811, a new and ingenious process for manufacturing a superior article was discovered in a British settlement, and the preparation is still confined to the British possessions. This commodity, known under the name of pearl sago, has by its superiority nearly driven the old article, always the produce of foreign countries, out of the market. Notwithstanding this, under our fiscal rules the British production is charged with a duty which ranges, *ad valorem*, from thirty-three to one hundred per cent., while the foreign one is charged with one not exceeding from eight to sixteen per cent. With respect to Indian articles which come into competition with colonial ones, the counter-vailing duties are nearly prohibitory in reference to domestic consumption for those that are the production of a British possession, and strictly so for those that are of foreign production. Sugar is the most remarkable example. The duty on Bengal sugar, estimated on the price, ranges from ninety to one hundred and fifty per cent. On China and Siam sugar it is from 250 to 400 per cent. On Mauritius or plantation sugar, it is only from eighty to one hundred and forty per cent. The great increase on the Indian revenue since 1811 has arisen on this last article; but this is a matter which has arisen wholly out of our own fiscal regulations.

These objects will, I conceive, be promoted by any additional facility given to the settlement of educated Englishmen in India, with the privilege of holding land like other classes; and by the instruction which the Natives are deriving, and may hereafter be expected still more to derive from them, through precept and example, it seems not unreasonable to expect a change for the better, independently of the natural effect on prices on the withdrawal of the precious metals. I need not, however, trouble the Board with any detail on this head, since there is easily to be had, from any gentlemen possessing a knowledge of the details of Indian agriculture and trade, to which I cannot pretend, the information necessary to enable it to judge how far the cost at the place of production and at the port of export of the main articles of commerce (piece-goods, indigo, silk, cotton, sugar, saltpetre, grain, coffee, tobacco, spirits, drugs, and dyes), is likely to be affected by the influence of European management and example, on fertility of soil, on labour, on the habits of the labourer, on the interest of money, on risk, on exaction, on the charges of conveyance, or on any thing else that regulates price; and they will from the same source be able to ascertain how far it is likely that the quantity of Indian produce will be improved, and at what cost, or that new articles suited to the English market, or to markets that influence the exchange with England, will be added to the list of its exports.

Mr. Maitland

Skill

Skill and capital, and character and credit, which create capital, should be invited to the country, not repulsed from it. Every measure should be taken that is likely to promote the introduction of new articles of export, or the improvement of the existing productions of the country. The peasantry who are the owners of their fields should be secured against unjust disturbances in the possession of them. All classes of cultivators should be protected against undefined and illegal exactions, the government land-rent, where still variable, should be fixed for a long term of years, internal transit duties should be abolished; the useful appropriation of waste land should be facilitated, the usury laws, which aggravate the evil of excessive interest, should be rescinded, a prompt and cheap, and as far may be a simple administration of justice, should be established, the improvement of the means of internal intercourse by land and water should be sedulously pursued, the establishment of joint stock societies for beneficial ends should be encouraged; useful inventions should be rewarded, and inventors and authors secured in the reasonable usufruct of their ingenuity. Whatever, in short, has made England prosper, should, unless there be clear ground of objection, be given to India; and similarly, all taxes or restrictions which bar the market of England against the productions of India should be abolished, unless there be clear and strong reason for maintaining them •

APPENDIX, No. 5.

STATEMENT of the RATES OF DUTY chargeable in *England* on all Articles the Produce of the *East-Indies*, showing the ALTERATIONS of DUTY which have taken place on such Articles since the Year 1812; and also the Rates now chargeable on similar Articles imported from other Countries.

APPENDIX,

AN ACCOUNT of the Specific RATES of DUTY chargeable in *England* on all ARTICLES the Produce Articles; and the Rates of Duty now chargeable

ARTICLES.	1812.	1813	1814.	1819.	1823.	1824.
	£ s. d.	£. s. d.	£ s. d.	£. s. d.	£. s. d.	£. s. d.
ALOEES, Hepatica or Barbadoes ... the lb.	0 1 0	0 1 2	0 1 3	0 0 9	0 0 9	0 0 9
——— Socotorina ... the lb.	0 2 0	0 2 4	0 2 6	0 2 6	0 2 6	0 2 6
——— Other sorts (except Cape) ... the lb.	0 1 0	0 1 2	0 1 3	0 0 9	0 0 9	0 0 9
* And further per cent. on the Values of the above Aloeas ...	2 13 4	3 3 4				
Arrow Root, per cent. on the Value ...	68 6 8	81 2 11	62 10 0	0 0 2	0 0 2	0 0 2
And further ... ditto ...	2 13 4	3 3 4		the lb. weight		
The produce of and imported from any British Possession ...	68 6 8	81 2 11	62 10 0	0 0 2	0 0 2	0 0 2
And further per cent. on Value ...	2 13 4	3 3 4		the lb. weight		
As alicata ... the lb.	0 0 8	0 0 9	0 0 10	0 0 10	0 0 10	0 0 10
And further per cent. on Value ...	2 13 4	3 3 4				
Banilla ... the cwt.	0 11 4	0 13 5	0 10 7	0 11 1	0 5 3	0 8 6
And further per cent. on Value ...	2 13 4	3 3 4				
Benjamin ... the lb.	0 1 4	0 1 7	0 1 8	0 2 0	0 2 0	0 2 0
And further per cent. on Value ...	2 13 4	3 3 4				
Borax, refined ... per lb.	0 1 4	0 1 7	0 1 8	0 1 8	0 0 6	0 0 6
And further per cent. on Value ...	2 13 4	3 3 4				
——— unrefined ... per lb.	0 0 6	0 0 7	0 0 7	0 0 8	0 0 3	0 0 3
And further per cent. on Value ...	2 13 4	3 3 4				
Camphor, unrefined ... the lb.	0 1 0	0 1 2	0 1 3	0 1 3	0 0 5	0 0 5
And further per cent. on Value ...	2 13 4	3 3 4				
Canes, Bamboo ... the 1,000	1 8 8	1 14 0	1 13 9	1 14 0	1 14 0	1 14 0
And further per cent. on Value ...	2 13 4	3 3 4				
——— Rattans (not Ground) ... the 1,000	1 8 8	1 14 0	1 13 9	1 0 0	1 0 0	1 0 0
And further per cent. on Value ...	2 13 4	3 3 4				
——— Walking, Mounted, Painted or otherwise Ornamented, per cent. on Value ...	68 6 8	81 2 11	62 10 0	50 0 0	50 0 0	50 0 0
And further per cent. on Value ...	2 13 4	3 3 4				
Whanghees, Jamboo, Ground Rattans, Dragon's Blood, and other Walking Cones ... the 1,000	3 6 8	3 10 2	4 0 0	4 0 0	4 0 0	4 0 0
And further per cent. on Value ...	2 13 4	3 3 4				
Cardamums ... the lb.	0 1 8	0 1 11	0 2 1	0 2 0	0 2 0	0 2 0
And further per cent. on Value ...	2 13 4	3 3 4				
Cassia Buds ... the lb.	0 1 4	0 1 7	0 1 8	0 2 6	0 2 6	0 2 6
And further per cent. on Value ...	2 13 4	3 3 4				
Cassia Lignea ... the lb.	0 2 0	0 2 4	0 2 6	0 2 6	0 2 6	0 2 6
Imported from a British Possession, the lb.	0 2 0	0 2 4	0 2 6	0 2 6	0 2 6	0 2 6
And further per cent. on Values of the above ...	2 13 4	3 3 4				
China Ware, per cent. on Value ...	109 6 8	129 16 8	125 0 0	75 0 0	75 0 0	75 0 0
And further, ditto ...	2 13 4	3 3 4				
——— or Porcelain, Coloured ...	109 6 8	129 16 8	125 0 0	75 0 0	75 0 0	75 0 0
——— Plain ...	109 6 8	129 16 8	125 0 0	75 0 0	75 0 0	75 0 0
And further per cent. on Values of the above ...	2 13 4	3 3 4				

* The further Duties stated in this Account were Warehousing Duties, which ceased in 1810

5.

the *East-Indies*, shewing the Alterations of Duty which have taken place since the Year 1812 on those similar Articles imported from other Countries

1825.	1826	1827.	1828.	1829	1830.	1831.	1832	Rates of Duty now Chargeable on like Articles the Produce of other Countries.	
								British Colonies.	Foreign Countries
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
0 0 9	0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	0 0 8	0 0 2	0 0 4
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 0 9	0 0 2	0 0 4
0 0 9	0 0 9	0 0 9	0 0 9	0 0 9	0 0 9	0 0 9	0 0 2	0 0 2	0 0 4
The Produce of and imported from British Possessions							0 0 2	0 0 2	0 0 4
0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 1 0 per cwt.	0 0 2
0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	{ 0 1 0 per cwt. }	0 6 0	0 6 0
0 0 10	0 0 10	0 0 10	0 0 10	0 0 10	0 0 10	0 0 10	{ 0 6 0 per cwt. }	0 2 0	0 2 0
0 8 6	0 8 6	0 8 6	0 8 6	0 6 6	0 5 0	0 2 0	0 2 0	0 4 0	0 4 0
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	{ 0 4 0 per cwt. }	0 10 0	0 10 0
0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	{ 0 10 0 per cwt. }	0 1 0	0 1 0
0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	{ 0 4 0 per cwt. }	0 1 0	0 1 0
0 0 5	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	{ 0 1 0 per cwt. }	1 14 0	1 14 0
1 14 0	1 14 0	1 14 0	1 14 0	1 14 0	1 14 0	1 14 0	1 14 0	1 0 0	1 0 0
1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	30 0 0	30 0 0
30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	4 0 0	4 0 0
4 0 0	4 0 0	4 0 0	4 0 0	4 0 0	4 0 0	4 0 0	4 0 0	0 2 0	0 2 0
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 1 0	0 1 0	0 1 0
0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0
0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 0 6	0 1 0
0 1 0	0 1 0	0 1 0	0 1 0	0 0 6	0 0 6	0 0 6	0 0 6	30 0 0	30 0 0
30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	15 0 0	15 0 0
30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	15 0 0	15 0 0
15 0 0	15 0 0	15 0 0	15 0 0	15 0 0	15 0 0	15 0 0	15 0 0		

ARTICLES.	1812	1813	1814	1819	1823	1824
	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d
Guaiacum the lb.	0 2 0	0 2 1	0 2 6	0 2 6	0 2 6	0 2 6
And further per cent. on Value	2 13 1	3 5 1				
Imported from any British Possession, per lb.	0 2 0	0 2 1	0 2 6	0 2 6	0 2 6	0 2 6
And further per cent. on Value	2 13 1	3 5 4				
Cloves..... the lb.	0 1 8	0 5 6	0 5 7	0 2 0	0 2 0	0 2 0
And further per cent. on Value	2 13 1	3 3 1				
Imported from any British Possession within the Limits .. the lb.	0 4 8	0 5 6	0 5 7	0 2 0	0 2 0	0 2 0
And further	2 13 1	3 3 1				
Coccus Indicus the lb.	0 2 0	0 2 1	0 2 6	0 2 6	0 2 6	0 2 6
And further per cent. on Value	2 13 1	3 3 1				
Cochineal the lb.	0 0 8	0 0 9	0 0 10	0 0 10	0 0 10	0 0 10
And further per cent. on Value	2 13 4	3 3 4				
Cochineal Dust..... the lb.	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2
And further per cent. on Value	2 13 4	3 3 4				
Cochineal, the Produce of and imported from any British Possession.....the lb.	0 0 8	0 0 9	0 0 10	0 0 10	0 0 10	0 0 10
— Dust.....ditto.....ditto	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2
And further per cent. on the Values of the above	2 13 4	3 3 4				
Coffee the lb.	0 0 4	0 0 4	0 0 5	Wholly Excise until 1825, when the Duties were wholly Customs ...		
Excise Duty per lb.	0 0 3	0 0 3	0 0 3	to 8 June 3	0 1 0	0 1 0
And further per cent. on Value	3 6 8	3 19 2	0 5 0	after do 1 0		
Imported from any British Possession within the Limits per lb.	0 0 4	0 0 4	0 0 5	Wholly Excise until 1825 ...		
Excise Duty per lb.	0 0 6	0 0 6	0 0 6	to 8 June 6	0 1 6	0 1 6
Imported from any other Place within the Limits per lb.	0 0 1	0 0 3	0 0 5	ditto	ditto	...
Excise Duty per lb.	0 0 6	0 0 6	0 0 6	to 8 June 6	0 1 6	0 1 6
And further per cent. on the Values of the above	2 13 4	3 3 4	0 5 0	after do 1 6		
* Excise Duty also.			per cwt.	Note.—The Warehousing Duty of 5s until 1819, when it ceased, in com-		
Cotton Rope, per cent. on Value.....	68 6 8	81 2 11	62 10 0	50 0 0	50 0 0	50 0 0
And further per cent. on Value	2 13 4	3 3 4				
— Old, and fit only to be made into Mats. } per cent. on Value	68 6 8	81 2 11	62 10 0	50 0 0	50 0 0	50 0 0
And further per cent. on Value	2 13 4	3 3 4				
Cambo Root the lb.	0 1 4	0 1 7	0 1 8	0 2 0	0 2 0	0 2 0
And further per cent. on Value	2 13 4	3 3 4				

								Rates of Duty now Chargeable on like Articles the Produce of other Countries		
1825	1826.	1827.	1828	1829	1830	1831.	1832.	British Colonies.	Foreign Countries.	
£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	
0 2 6	0 3 6	0 3 6	0 3 6	0 1 0	0 1 0	0 1 0	0 1 0	} 0 0 6	0 1 0	
0 2 6	0 2 6	0 2 6	0 2 6	0 0 6	0 0 6	0 0 6	0 0 6		0 0 6	
0 2 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0		} 0 2 0	0 3 0
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0		
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6		0 2 6
0 1 0	{ to the 5 July, 0 1 0 after 5 July, 0 0 6 }	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 2	0 0 6
0 0 2		{ to the 5 July, 0 0 5 after 5 July, 0 0 2 }	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2
0 0 1			{ to the 5 July, 0 0 1 after 5 July, 0 0 2 }	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2
0 0 1	{ to the 5 July, 0 0 1 after 5 July, 0 0 1 }			0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1
from 5 April to 5 July, 0 1 6 after 5 July, 0 1 3		{ 0 1 3 after 5 July, 0 1 0 }		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 0 6	0 1 3
5 Apr. to 5 July, 0 1 6 after 5 July, 0 0 9			{ 0 0 9 after 5 July, 0 0 9 }	0 0 9	0 0 9	0 0 9	0 0 9	0 0 9	0 0 9	0 0 6	0 1 3
5 Apr. to 5 July, 0 1 6 after 5 July, 0 1 3	{ 0 1 3 after 5 July, 0 1 0 }			0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 0 6	0 1 3
the hundred-weight, suspended by Treasury Order dated 19th September 1816, mon with the other Warehousing Duties.										
{ 0 10 9 } per cwt		0 10 9	0 10 9	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0
20 0 0	20 0 0	20 0 0	{ 0 5 0 per ton wt }	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0

(continued)

(continued)

ARTICLES.	1812.	1813	1814.	1819.	1823.	1824
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Cotton Manufactures, viz Muslins, Plain,						
* Nankin Cloths .....	...	...	...	...	...	...
{ Flowered } Muslins,	27 6 8	32 9 2	32 10 0	37 10 0	37 10 0	37 10 0
or						
{ Stitched } White Calicoes			*			
For every £100 of the Value						
And further ditto ditto	10 0 0	11 17 6	5 0 0	7		
Calicoes, Plain, White,						
Dimities, ditto, ditto,	68 6 8	81 2 11	62 10 0	67 10 0	67 10 0	67 10 0
For every £100 of the Value						
And further ditto ditto	3 6 8	3 19 2	5 0 0			
Prohibited to be worn, or used, in Great Britain .....	* ...	...	...	...	...	...
Warehousing Duty	3 6 8	3 19 2	5 0 0			
Articles of Manufactures of Cotton, wholly or in part made up, not otherwise charged with Duty, for every £100 of the Value	27 6 8	32 9 2	32 10 0	50 0 0	50 0 0	50 0 0
Cubebs	0 0 8	0 0 9½	0 0 10	0 2 0	0 2 0	0 2 0
And further per cent. on the Value ...	2 13 4	3 3 4				
Ebony	6 16 8	8 2 3½	8 2 6	0 15 0	0 15 0	0 15 0
And further per cent. on Value	2 13 4	3 3 4				
The produce of and imported from a British Possession	6 16 8	8 2 3½	8 2 6	0 15 0	0 15 0	0 15 0
Green, the Produce of and imported from a British Possession	6 16 8	8 2 3½	8 2 6	0 15 0	0 15 0	0 15 0
And further per cent. on the Value of the above	2 13 4	3 3 4		*		
Galangal	0 0 4	0 0 4½	0 0 5	0 0 6	0 0 6	0 0 6
And further per cent. on Value	2 13 4	3 3 4				
Galls	0 9 4	0 11 1	0 11 8	0 11 2	0 11 2	0 11 2
And further per cent. on Value	2 13 4	3 3 4				
Gambogo	0 1 4	0 1 7	0 1 8	0 1 8	*0 1 8	0 1 8
And further per cent. on Value						
Ginger	0 19 4	1 2 11½	1 2 6	1 3 0	1 3 0	1 3 0
And further per cent. on Value	2 13 4	3 3 4				
Preserved	0 2 8	0 3 2	0 3 1½	0 3 2	0 0 6	0 0 6
And further per cent. on Value	2 13 4	3 3 4				
the Produce of and imported from a British Possession	0 19 4	1 2 11½	1 2 6	1 3 0	1 3 0	1 3 0
Ditto ... ditto ... preserved	0 2 8	0 3 2	0 3 1½	0 3 2	0 0 6	0 0 6
And further per cent. on Values	2 13 4	3 3 4				
Gum Ammoniac	0 1 0	0 1 2½	0 1 3	0 1 3	0 1 3	0 1 3
And further per cent. on Value	2 13 4	3 3 4				
Gum Animi, viz. rough and not cleaned	0 0 8	0 0 9½	0 0 10	0 1 8	0 0 6	0 0 6
scraped or cleaned	0 0 8	0 0 9½	0 0 10	0 1 8	0 0 6	0 0 6
And further per cent. on Values	2 13 4	3 3 4				
Gum Arabic	0 10 0	0 11 10½	0 11 8	0 12 0	0 12 0	0 12 0
And further per cent. on Value	2 13 4	3 3 4				
Imported from a British Possession						
the cwt.	20 10 0	0 11 10½	0 11 8	0 12 0	0 12 0	0 12 0
And further on Value	2 13 4	3 3 4				

								Rates of Duty now Chargeable on like Articles the Produce of other Countries.	
1825.	1826.	1827.	1828.	1829.	1830.	1831.	1832.	British Colonies.	Foreign Countries.
£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
*By Treasury Order, 22 April, Nankin Cloths paid £10 per cent., which rate was continued per Act 1826.									
37 10 0	*10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0
67 10 0	*10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0
...	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0
20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 0 6	0 0 6	0 0 6
0 15 0	from 5 January to 5 July, 24 11 0 after 5 July, 10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	0 15 0	10 0 0
0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0		
0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	10 0 0
0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6
0 11 2	{ 0 11 2 after 5 July, 0 5 0 }	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 2 0	0 2 0	0 2 0
0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	{ 0 4 0 per cwt. }	0 4 0	0 4 0
1 3 0	2 13 0	2 13 0	2 13 0	2 13 0	2 13 0	2 13 0	2 13 0	0 11 6	2 13 0
0 0 6	0 3 2	0 3 2	0 3 2	0 3 2	0 3 2	0 3 2	0 3 2	0 3 2	0 3 2
0 11 6	0 11 6	0 11 6	0 11 6	0 11 6	0 11 6	0 11 6	0 11 6	0 11 6	2 13 0
0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	0 0 3	0 3 2
0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	{ 0 6 0 per cwt. }	0 6 0	0 6 0
0 0 5	0 0 5	0 0 5	0 0 5	0 0 5	0 0 5	0 0 5	{ 0 6 0 per cwt. }	0 6 0	0 6 0
0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6		0 6 0	0 6 0
0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 6 0	0 6 0	0 6 0
0 12 0	0 12 0	0 12 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0

(continued)

ARTICLES.	1812.	1813.	* 1814	1819.	1823.	1824
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Gum Copal, rough and not cleaned the lb.	0 1 4	0 1 7	0 1 8	0 1 8	0 0 6	0 0 6
— scraped or cleaned the lb.	0 1 4	0 1 7	0 1 8	0 1 8	0 0 6	0 0 6
And further per cent. on the Value...	2 13 4	3 3 4		0 1 6	0 1 6	0 1 6
Gum Kino, per cent. on the Value.....	50 0 0	59 7 6	50 0 0	per lb. wt. }	0 1 6	0 1 6
And further per cent. on Value.....	2 13 4	3 3 4				
Gum Lac, viz. Cane Lac } the lb.	0 0 4	0 0 4½	0 0 5	0 0 5	10 0 0	
— Lac Lake } the lb.	0 0 4	0 0 4½	0 0 5	0 0 6	per cent. on value }	10 0 0
				per T. O }	20 0 0	
— Shell Lac, or } the lb.	0 0 6	0 0 7½	0 0 7½	0 0 8	5 0 0	20 0 0
— Seed Lac ... } the lb.	0 0 6	0 0 7½	0 0 7½	0 0 6	per cent. on value.	5 0 0
					5 0 0	
— Stick Lac the cwt	0 6 8	0 7 11	0 7 11	1 0 0	per cent. on value.	5 0 0
And further per cent. on their Values	2 13 4	3 3 4				
— Lac Dye the lb.	0 0 4	0 0 4½	0 0 5	0 0 6	10 0 0	10 0 0
And further per cent. on the Value ...	2 13 4	3 3 1			per cent. on value.	
Gum Tragacanth..... the lb.	0 0 10	0 0 11½	0 1 3	0 1 0	0 1 0	0 1 0
And further per cent. on the Value ...	2 13 4	3 3 4				
Hair or Goat's Wool, Manufactures of, or of Hair or Goat's Wool, and any other Material not particularly enumerated or charged with Duty, per cent. on the Value	68 6 8	81 2 11	62 10 0	67 10 0	67 10 0	67 10 0
And further per cent. on the Value ...	2 13 4	3 3 4	5 0 0			
Hemp, undressed the ton	0 6 8	0 7 11	0 7 11	0 8 0	0 8 0	0 8 0
The Produce of and imported from a British Possession the ton	0 6 8	0 7 11	0 7 11	0 8 0	0 8 0	0 8 0
And further per cent. on Value on the above	2 13 4	3 3 4				
Hides, not tanned: Buffalo, Bull, Cow, or Ox } per hide dry }	0 0 8	0 0 9½	0 0 10	0 0 6	{ 0 4 8 }	0 4 8
— Ditto..... ditto wet	0 0 8	0 0 9½	0 0 10	0 0 6	per cwt. }	0 2 4
— Ditto..... the Produce of the British Possessions dry	0 0 8	0 0 9½	0 0 10	0 0 6	0 4 8	0 4 8
— Ditto ditto wet	0 0 8	0 0 9½	0 0 10	0 0 6	0 4 8	0 2 4
— Horse, Mare, or Gelding..... per hide dry	0 0 8	0 0 9½	0 0 10	0 0 10	0 4 8	0 4 8
— Ditto ditto wet	0 0 8	0 0 9½	0 0 10	0 0 10	0 4 8	0 2 4
— Ditto the produce of the British Possessions dry	0 0 8	0 0 9½	0 0 10	0 0 10	0 4 8	0 4 8
— Ditto ditto wet	0 0 8	0 0 9½	0 0 10	0 0 10	0 4 8	0 2 4
And further per cent. on the respective Values of the above	2 13 4	3 3 4		0 5 0	0 5 0	0 5 0
Horns, viz. Buffalo, Bull, Cow, or Ox the 100	0 4 8	0 5 6½	0 5 5	per cwt. }	0 5 0	0 5 0
And further per cent. on Value.....	2 13 4	3 3 4				
Indigo per 100 lbs	0 14 4	0 17 0½	0 17 0½	0 0 5	0 0 5	0 0 5
Produce of and imported from a British Possession	0 14 4	0 17 0½	0 17 0½	0 0 5	0 0 5	0 0 5
And further per cent. on Value.....	2 13 4	3 3 4	0 6 2			
Lacquered Ware, per cent. on Value.....	68 6 8	81 2 11	62 10 0	62 10 0	62 10 0	62 10 0
And further per cent. on Value.....	2 13 4	3 3 4				
Mace..... per lb.	0 7 8	0 9 1½	0 9 2	0 3 6	0 3 6	0 3 6
Imported from a British Possession... per lb.	0 7 8	0 9 1½	0 9 2	0 3 6	0 3 6	0 3 6
And further per cent. on the Values ...	2 13 4	3 3 4				

II.—FINANCE.—COMMERCIAL.

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								Rates of Duty now Chargeable on like Articles the Produce of other Countries.	
1825.	1826.	1827.	1828.	1829.	1830.	1831.	1832.	British Colonies.	Foreign Countries.
£. s. d. 0 0 5 0 0 6 0 1 6 10 0 0 20 0 0 5 0 0 5 0 0 5 0 0 0 1 0 30 0 0 0 4 8 } per cwt } free ...	£. s. d. 0 0 5 0 0 6 0 1 6 10 0 0 20 0 0 5 0 0 5 0 0 5 0 0 0 1 0 30 0 0 0 4 8 }	£. s. d. 0 0 5 0 0 6 0 1 6 10 0 0 20 0 0 5 0 0 5 0 0 5 0 0 0 1 0 30 0 0 0 4 8 }	£. s. d. 0 0 5 0 0 6 0 1 6 10 0 0 20 0 0 5 0 0 5 0 0 5 0 0 0 1 0 30 0 0 0 4 8 }	£. s. d. 0 0 5 0 0 6 0 1 6 10 0 0 20 0 0 5 0 0 5 0 0 5 0 0 0 1 0 30 0 0 0 4 8 }	£. s. d. 0 0 5 0 0 6 0 1 6 10 0 0 20 0 0 5 0 0 5 0 0 5 0 0 0 1 0 30 0 0 0 4 8 }	£. s. d. 0 0 5 0 0 6 0 1 6 10 0 0 20 0 0 5 0 0 5 0 0 5 0 0 0 1 0 30 0 0 0 4 8 }	£. s. d. 0 6 0 0 6 0 } per cwt } 0 6 0 0 6 0 } per cwt } 0 1 0 0 6 0 } per cwt } 0 6 0 0 6 0 } per cwt } free ...	£. s. d. 0 6 0 0 6 0 0 6 0 0 6 0 0 6 0 0 1 0 0 6 0 0 6 0 0 0 1 } per cwt } free ...	£. s. d. 0 6 0 0 6 0 0 6 0 0 6 0 0 6 0 0 1 0 0 6 0 0 6 0 0 0 1 } per cwt } free ...
0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 4 30 0 0 0 3 6 0 3 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 4 6 0 3 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 4 6 0 3 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 4 6 0 3 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 4 6 0 3 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 4 6 0 3 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 4 6 0 3 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 4 6 0 3 6	0 2 4 0 1 2 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 3 30 0 0 0 3 6 0 4 6	0 4 8 0 2 4 0 2 4 0 1 2 0 4 8 0 2 4 0 2 4 0 1 2 0 2 4 0 0 4 0 0 4 30 0 0 0 4 6 0 4 6

ARTICLES.	1812.	1813	1814	1819	1823	1824
	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d
Madder Root the cwt.	0 4 0	0 4 9	0 5 0	0 5 0	0 5 0	0 5 0
And further per cent. on the Value	2 13 4	3 3 4				
Mangoes.....the gallon	0 4 0	0 4 9	0 5 0	0 5 0	0 5 0	0 5 0
And further per cent. on the Value	2 13 4	3 3 4				
Mats and Matting, per cent. on the Value	68 6 8	81 2 11	62 10 0	50 0 0	50 0 0	50 0 0
Imported from a British Possession, per cent. on the Value.....	68 6 8	81 2 11	62 10 0	50 0 0	50 0 0	50 0 0
And further per cent. on the Value	2 13 4	3 3 4				
Mother of Pearl Shells, rough.....the lb.	0 0 8	0 0 9	0 0 10	20 0 0	5 0 0	5 0 0
And further per cent. on Value	2 13 4	3 3 4		per cent. on val }		
Musk per oz.	0 4 0	0 4 9	0 5 0	0 5 0	0 5 0	0 5 0
And further per cent. on Value	2 13 4	3 3 4				
Myrrh per lb.	0 1 4	0 1 7	0 1 8	0 1 8	0 1 8	0 1 8
And further per cent. on Value	2 13 4	3 3 4				
Nutmegs per lb.	0 4 8	0 5 6	0 5 5	0 2 6	0 2 6	0 2 6
Imported from a British Possession, per lb.	0 4 8	0 5 6	0 5 5	0 2 6	0 2 6	0 2 6
And further per cent. on Value	2 13 4	3 3 4				
Nux Vomica.....per lb.	0 1 0	0 1 2	0 1 3	0 2 6	0 2 6	0 2 6
And further per cent. on Value.....	2 13 4	3 3 4				
Olibanum .....the cwt.	2 0 0	2 7 6	2 7 6	2 7 6	2 7 6	2 7 6
And further per cent. on Value	2 13 4	3 3 4				
Orpiment the cwt.	1 4 0	1 8 6	1 10 0	1 8 6	1 8 6	1 8 6
And further per cent. on Value.....	2 13 4	3 3 4				
Oil of Aniseed .....per cent on Value	68 6 8	81 2 11	0 3 9	0 4 0	0 4 0	0 4 0
And further per cent. on Value	2 13 4	3 3 4	per lb wt }			
— Cayaputa.....the oz.	0 2 0	0 2 4	0 2 6	0 1 0	0 1 0	0 1 0
And further per cent. on Value	2 13 4	3 3 4				
— Cassia .....the oz.	0 2 0	0 2 4	0 2 6	0 5 0	0 5 0	0 1 0
And further per cent. on Value.....	2 13 4	3 3 4				
— Castor.....per lb.	0 1 0	0 1 2	0 1 3	0 1 3	0 1 3	0 1 3
Imported from a British Possession	0 1 0	0 1 2	0 1 3	0 1 3	0 1 3	0 1 3
within the Limits						
Produce and imported from a British Possession	0 1 0	0 1 2	0 1 3	0 1 3	0 1 3	0 1 3
And further per cent. on Value.....	2 13 4	3 3 4				
— Cinnamon the oz.	0 4 0	0 4 9	0 5 0	0 5 0	0 5 0	0 1 0
And further per cent. on Value	2 13 4	3 3 4				
— Cloves.....the oz.	0 1 4	0 1 7	0 1 8	0 2 0	0 2 0	0 2 0
And further per cent. on Value.....	2 13 4	3 3 4				
— Mace the oz.	0 1 8	0 1 11	0 2 1	0 2 6	0 2 6	0 2 6
And further per cent. on Value	2 13 4	3 3 4				
— Nutmegs .....the oz.	0 1 8	0 1 11	0 2 1	0 2 6	0 2 6	0 2 6
And further per cent. on Value.....	2 13 4	3 3 4				
— Cocoa Nut.....	68 6 8	81 2 11	3 6 6	0 2 6	0 2 6	0 2 6
			per ton, by Treasury Order, 22 August 1814	per cwt. }		
And further per cent. on Value.....	2 13 4	3 3 4				
Excise Duty .....per lb.	0 2 0	0 2 0	0 2 0	Until 8 June 0 2 0 after 8 June 0 1 6	0 1 6	0 1 6

1825	1826.	1827.	1828.	1829.	1830	1831.	1832.	Rates of Duty now Chargeable on like Articles the Produce of other Countries	
								British Colonies.	Foreign Countries
£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6	£. s. d. 0 1 6
0 5 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0
20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	5 0 0	20 0 0
20 0 0	20 0 0	20 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0		
5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0
0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 0 6	0 0 6	0 0 6
0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	{ 0 6 0 } per cwt.	0 6 0	0 6 0
0 2 6	0 3 6	0 3 6	0 3 6	0 3 6	0 3 6	0 3 6	0 3 6	0 2 6	0 3 6
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6		
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6
2 0 0	2 0 0	0 2 0	0 2 0	0 2 0	2 0 0	2 0 0	0 6 0	0 6 0	0 6 0
1 8 6	1 8 6	1 8 6	1 8 6	1 8 6	1 8 6	1 8 6	1 8 6	1 8 6	1 8 6
0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 1 4	0 1 4	0 1 4
0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	{ 0 1 4 } per lb.	0 1 4	0 1 4
0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	{ 0 1 4 } per lb.	0 1 4	0 1 4
0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	Imported from	0 1 0
0 1 0	0 0 9	0 0 9	0 0 3	0 0 3	0 0 3	0 0 3	0 0 3		
0 0 6	0 0 6	0 0 6	{ 0 0 3 } (imported from a British Possession)	{ 0 0 3 }	{ 0 0 3 }	{ 0 0 3 }	0 2 6	0 2 6	if produce of
							p' cwt if pro- duce also	per cwt.	
0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	{ 0 1 4 } per lb.	0 1 4	0 1 4
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	{ 0 14 0 } per lb.	0 14 0	0 14 0
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	{ 0 1 4 } per lb.	0 1 4	0 1 4
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	{ 0 1 4 } per lb.	0 1 4	0 1 4
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6
To 5 April 0 1 6	Transferred to Customs.								

ARTICLES.	1812.	1813.	1814	1819.	1820.	1821
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Paper for Hangings..... the yard square	0 1 0	0 1 2	0 1 3	0 1 7	0 1 7	0 1 7
— not otherwise described..... per lb.	0 1 4	0 1 7	0 1 8	0 1 7	0 1 7	0 1 7
And further per cent. on the Values	2 13 4	3 3 4				
Pearls, per cent. on the Values.....	13 6 8	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0
And further per cent. on Value.....	2 13 4	3 3 4				
Pepper..... the lb	0 1 8	0 1 11	0 1 10	Wholly Excise until 1825.		
Excise Duty { All Pepper imported, not being Cayenne, Long Pepper or Guinea Pepper } per lb	...	...	...	0 2 6	0 2 6	0 2 6
Imported from a British Possession, the lb.	0 1 8	0 1 11	0 1 10	Wholly Excise until 1825		
— Capsicum or Chillies..... the lb.	0 4 0	0 4 9	0 5 0	0 2 6	0 0 3	Free ...
Imported from a British Possession, the lb.	0 4 0	0 4 9	0 5 0	0 2 6	0 0 3	Free ...
— Cayenne Pepper..... the lb.	0 4 0	0 4 9	0 5 0	0 2 6	0 2 6	Free ...
Imported from a British Possession, the lb.	0 4 0	0 4 9	0 5 0	0 2 6	0 2 6	Free ...
— Guinea Pepper the lb	0 4 0	0 4 9	0 5 0	0 2 6	0 2 6	Free ...
Imported from a British Possession, the lb	0 4 0	0 4 9	0 5 0	0 2 6	0 2 6	Free ...
— Long the lb.	0 0 8	0 0 9	0 0 10	0 2 0	0 2 0	Free ...
Imported from a British Possession, the lb	0 0 8	0 0 9	0 0 10	0 2 0	0 2 0	Free ...
And further per cent. on the Values	2 13 4	3 3 4				
Rhubarb the lb.	0 1 8	0 1 11	0 2 1	0 2 6	0 2 6	0 2 6
Imported from a British Possession the lb.	0 1 8	0 1 11	0 2 1	0 2 6	0 2 6	0 2 6
And further per cent. on the Values	2 13 4	3 3 4				
Rice, not being in the Husk the cwt.	0 6 4	0 7 6	0 7 6	0 15 0	0 15 0	0 15 0
— being in the Husk ditto	0 6 4	0 7 6	0 7 6	0 10 0	0 10 0	0 10 0
The Produce of and imported from a British Possession: viz.						
— not being in the Husk the cwt.	0 6 4	0 7 6	0 7 6	0 5 0	0 5 0	0 5 0
— being in the Husk ditto	0 6 4	0 7 6	0 7 6	0 2 6	0 2 6	0 2 6
And further per cent. on the Values	2 13 4	3 3 4				

1823.	1825.	1826	1827.	1828.	1830.	1831.	1832	Rates of Duty now Chargeable on like Articles the Produce of other Countries.	
								British Colonies.	Foreign Countries
£ s. d. 0 1 7 0 1 7	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9	£ s. d. 0 1 0 0 0 9
5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0	5 0 0
...	0 2 6	From 5 Jan. to to 6 July, after 5 July, 0 1 2		0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	
0 2 6	...	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 0		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 2		0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 0		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 2		0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 0		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 2		0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 0		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 2		0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 0		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 2		0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 0		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 2		0 1 2	0 1 2	0 1 2	0 1 2	0 1 2	
Wholly Excise	0 2 6	5 Jan. to 6 July, 0 1 6 after 5 July, 0 1 0		0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	
0 2 6	0 2 6	0 4 0	0 4 0	0 2 8	0 2 8	0 2 8	0 1 0	0 1 0	0 1 0
0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6
0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0
{ 0 2 6 }	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6	0 2 6
{ the bushel }								{ per quarter }	{ per bushel }
0 5 0	0 5 0	0 5 0	0 4 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0
{ 0 0 7½ }	0 0 7½	0 0 7½	0 0 3	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1
{ the bushel }				{ the quarter }					

ARTICLES.	1812.	1813.	1814	1819	1823.	1824.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Safflower the cwt.	0 7 4	0 8 8½	0 8 9	0 8 9	0 8 9	0 8 9
And further per cent. on Value	2 13 4	3 3 4				
Sago, viz. Pearl the lb.	0 0 6	0 0 7½	0 0 7½	0 0 8	the cwt. { 1 10 0 1 10 0 1 10 0 1 10 0 1 10 0	1 10 0
Imported from a British Possession.....	0 0 6	0 0 7½	0 0 7½	0 0 8		1 10 0
Common..... the lb.	0 0 6	0 0 7½	0 0 7½	0 0 8		1 10 0
Imported from a British Possession.....	0 0 6	0 0 7½	0 0 7½	0 0 8		1 10 0
Powder, per cent. on the Value	68 6 8	81 2 11	{ 0 0 7½ } the lb. wt. }	0 0 8		1 10 0
Imported from a British Possession.....	68 6 8	81 2 11	{ 0 0 7½ } the lb. wt. }	0 0 8		1 10 0
And further per cent. on the Values...	2 13 4	3 3 4				
Saltpetre the cwt.	0 0 4	0 0 4½	0 0 5	0 0 6	0 0 6	0 0 6
Sanguis Draconis.....the lb.	0 1 4	0 1 7	0 1 8	0 1 8	0 1 8	0 1 8
And further per cent. on Value.....	2 13 4	3 3 4				
Sapan Wood, per cent. on Value	26 13 4	31 13 1	31 5 0	20 0 0	20 0 0	20 0 0
And further per cent. on Value.....	2 13 4	3 3 4				
Saunders, Red Wood..... per cwt.	0 3 4	0 3 11½	0 4 2	{ 0 15 0 } the ton }	0 15 0	0 15 0
And further per cent. on Value.....	2 13 4	3 3 4				
Seed, viz. Anniseed..... the cwt.	1 18 0	2 5 1½	2 5 0	3 0 0	3 0 0	3 0 0
And further per cent. on Value.....	2 13 4	3 3 4				
Senna the lb.	0 1 0	0 1 2½	0 1 3	0 1 3	0 1 3	0 1 3
And further per cent. on Value.....	2 13 4	3 3 4				
Silk, Raw, Bengal the lb.	0 4 0	0 4 0	0 3 9	0 4 0	0 4 0	0 4 0
And further per cent. on Value	2 13 4	3 3 4	{ 0 0 4 } per lb. wt. }			
of any other Sort the lb.	0 5 8	0 5 8	0 5 7½	0 5 6	0 5 6	0 5 6
And further per cent. on Values	2 13 4	3 3 4	{ 0 0 6 } per lb. wt. }			
Silk Manufactures, viz. Bandannoes and all other Handkerchiefs, in Pieces, not exceeding six yards in length	Prohibited for Home Use until 1826...			...	...	...
If more than six yards and not exceeding seven yards in length.....	...	Ditto	...	...	...	...
And further for every additional length, not exceeding a yard .....	...	Ditto	...	...	...	...
Taffeties and other Plain or Figured Silks, not otherwise described .....	...	Ditto	...	...	...	...
The produce of and imported from a British Possession .....	...	Ditto	...	...	...	...
Canton or China Crapes .....	...	Ditto	...	...	...	...
If flowered or tamboured with Silk .....	...	Ditto	...	...	...	...
Manufactures of Silk, or of Silk and any Material, not otherwise charged with Duty .....	...	Ditto	...	...	...	...
The produce of and imported from a British Possession.....	...	Ditto	...	...	...	...
Warehousing Duties chargeable on the above, although prohibited for Home Use, per cent. on the Values	3 6 8	3 19 2	5 0 0			

II.—FINANCE.—COMMERCIAL.

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1825.	1826.	1827.	1828.	1829.	1830.	1831.	1832.	Rates of Duty now Chargeable on like Articles the Produce of other Countries	
								British Colonies.	Foreign Countries
£ s. d.	£. s. d.	£ s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£ s. d.	£. s. d.
0 5 0	{ until 5 July 0 5 0 after 5 July 0 2 6 }	0 2 6	0 2 0	0 2 6	0 2 6	0 2 6	0 1 0	0 1 0	0 1 0
1 10 0	1 10 0	1 10 0	1 10 0	0 15 0	0 15 0	0 15 0	0 1 0	0 1 0	0 1 0
1 10 0	1 10 0	1 10 0	1 0 0	0 10 0	0 10 0	0 10 0			
0 15 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0	0 5 0			
0 15 0	0 5 0	0 5 0	0 1 0	0 1 0	0 1 0	0 1 0			
1 10 0	1 10 0	1 10 0	1 10 0	0 15 0	0 15 0	0 15 0			
1 10 0	1 10 0	1 10 0	1 0 0	0 10 0	0 10 0	0 10 0			
0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6	0 0 6
0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	0 1 8	{ 0 4 0 per cwt. }	{ 0 4 0 }	{ 0 4 0 }
{ 0 15 0 the ton }	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0	0 1 0	0 1 0	0 1 0
0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 1 0	0 1 0	0 1 0
3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	0 5 0	0 5 0	0 5 0
0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	0 1 3	0 0 6	0 0 6	0 0 6
0 4 0	{ 0 0 3 after 5 July 0 0 1 }	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1
0 5 6	{ 0 0 3 after 5 July 0 0 1 }	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1		
...	{ 30 0 0 per cent. on value. }	{ 0 6 0 per piece. }	0 6 0	{ 20 0 0 per cent. on value. }	20 0 0	20 0 0	20 0 0	30 0 0 per cent	
...	{ 30 0 0 per cent. on value. }	{ 0 7 0 per piece. }	0 7 0	{ 20 0 0 per cent. on value. }	20 0 0	20 0 0	20 0 0		
...	{ 30 0 0 per cent. on value. }	{ 0 1 0 per yard. }	0 1 0	{ 20 0 0 per cent. on value. }	20 0 0	20 0 0	20 0 0		
...	{ 30 0 0 p' ct on value. }	{ 0 10 0 per lb. wt. }	0 10 0	{ 30 0 0 p' ct. on val. }	30 0 0	30 0 0	30 0 0		
...	{ 30 0 0 p' ct on value. }	{ 0 10 0 per lb. wt. }	0 10 0	{ 20 0 0 p' ct. on val. }	20 0 0	20 0 0	20 0 0		
...	{ 30 0 0 p' ct. on value. }	{ 0 10 0 per lb. wt. }	0 10 0	{ 30 0 0 p' ct. on val. }	30 0 0	30 0 0	30 0 0		
...	{ 30 0 0 p' ct. on value. }	{ 1 4 0 per lb. wt. }	1 4 0	{ 30 0 0 p' ct. on val. }	30 0 0	30 0 0	30 0 0		
...	{ 30 0 0 p' ct on value. }	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0		
...	{ 30 0 0 p' ct on value. }	30 0 0	30 0 0	20 0 0	20 0 0	20 0 0	20 0 0		

ARTICLES.	1812.	1813	1814.	1819	1823.	1824.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Soap, Hard, per cent. on Value	68 6 8	81 2 11	62 10 0	50 0 0	{ 1 8 0 } per cwt.	1 8 0
The produce of a British Possession...	68 6 8	81 2 11	62 10 0	50 0 0	{ 1 8 0 } per cwt.	1 8 0
And further per cent. on Values ...	2 13 4	3 3 4				
Spirits, viz.: Arrack	0 1 8	0 1 11½	0 2 1	0 2 1	0 2 1	0 2 1
Excise Duty also until 1825	0 19 1½	0 19 1½	0 17 0½	0 17 0½	0 17 0½	0 17 0½
the produce of a British Possession	0 1 8	0 1 11½	0 2 1	0 2 1	0 2 1	0 2 1
And further per cent. on Value ...	2 13 4	3 3 4				
Excise Duty also until 1825 ... per gall	0 17 4½	0 17 4½	0 15 5½	0 15 5½	0 15 5½	0 15 5½
Sugar	1 18 0	1 13 0	2 0 0	2 0 0	3 3 0	3 3 0
The produce of and imported from a British Possession	1 13 0	1 13 0	2 0 0	2 0 0	2 0 0	2 0 0
And further per cent. on Value ...	1 0 0	1 0 0				
<i>Note:—A portion of the above Duties on Sugar were suspended under the authority of the Lords of the Treasury, according to the average prices published in the Gazette every four months until 1826, when the sus- pension ceased</i>						
Tea, per cent. on the Value	6 0 0	6 0 0	6 0 0	all Excise. { until 8 June } 96 0 0 { Cust. & Exc }		
Excise	90 0 0	90 0 0	90 0 0			
An Excise Duty also until 1819, when the Duty was wholly collected by the Excise:						
On all Tea sold at or under 2s. per lb.	...	...	...	{ after 8 June } 96 0 0	96 0 0	96 0 0
Ditto, above 2s. per lb. ....	...	...	...	100 0 0	100 0 0	100 0 0
Teeth, Elephant's, not exceeding 21 lbs weight each tooth	3 6 8	3 19 2	4 0 0	2 0 0	2 0 0	2 0 0
exceeding 21 lbs. weight, each tooth	3 6 8	3 19 2	4 0 0	4 0 0	4 0 0	4 0 0
Sea Cow, Sea Horse, or Sea Horse, the lb.	0 1 4	0 1 7	0 1 8	{ 3 4 0 } per cwt.	3 4 0	3 4 0
And further per cent. on Values ...	2 13 4	3 3 4				
Terra Japonica	0 0 8	0 0 9½	0 0 10	0 0 10	0 0 10	{ 0 3 0 } per cwt.
And further per cent. on Value ...	2 13 4	3 3 4				
Tin, per cent. on Value	26 13 4	31 13 4	31 5 0	{ 5 9 3 } per cwt.	5 9 3	5 9 3
And further per cent. on Value ...	2 13 4	3 3 4				
Tobacco, Manufactured or Segars, per 100 lbs.	3 3 9	3 16 6½	per lb. weight	wholly Excise	{ 0 12 0 } per lb. wt. Excise duty also	0 12 0
And further per cent. on Value ...	2 13 4	3 3 4				
Excise Duty	{ to 5 July, 0 1 7 aft. 5 July, 0 1 9 }	{ to 30 Mar. 0 1 9 aft 30 Mar. 0 1 11 }	0	{ from 8 June } 0 4 0	0 4 0	0 4 0
Fortoiseshell, rough	0 3 4	0 3 11½	0 3	0 4 0	0 4 0	0 4 0
the produce of, and imported from a British Possession	0 3 4	0 3 11½	0 3	0 4 0	0 4 0	0 4 0
Manufactured, per cent. on Value	68 6 8	81 2 11	62 10	50 0 0	50 0 0	50 0 0
And further per cent. on Values ...	2 13 4	3 3 4				
Furmerick	0 0 6	0 0 7½	0 0 7½	0 0 8	0 0 4	0 0 4
produce of, and imported from a British Possession	0 0 6	0 0 7½	0 0 7½	0 0 8	0 0 4	0 0 4
And further per cent. on Values ...	2 13 4	3 3 4				

1825	1826	1827.	1828.	1829.	1830.	1831.	1832.	Rates of Duty now Chargeable on like Articles the Produce of other Countries.	
								British Colonies.	Foreign Countries.
£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1 8 0	4 10 0	4 10 0	4 10 0	4 10 0	4 10 0	4 10 0	4 10 0	1 8 0	4 10 0
1 8 0	1 8 0	1 8 0	1 8 0	1 8 0	1 8 0	1 8 0	1 8 0		
0 17 6½ wholly Customs	1 2 6	1 2 6	1 2 6	1 2 6	1 2 6	1 2 6	1 2 6	0 9 0	1 2 6
0 17 6½	1 0 0	1 0 0	0 15 0	0 15 0	0 15 0	0 15 0	0 15 0		
3 3 0	3 3 0	3 3 0	3 3 0	3 3 0	3 3 0	3 3 0	3 3 0	1 4 0	3 3 0
2 0 0	1 17 0	1 17 0	1 17 0	1 17 0	1 12 0	1 12 0	1 12 0		
96 0 0	96 0 0	96 0 0	96 0 0	96 0 0	96 0 0	96 0 0	96 0 0	prohibited	
100 0 0	100 0 0	100 0 0	100 0 0	100 0 0	100 0 0	100 0 0	100 0 0		
1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0 per cwt.	1 0 0
1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0		
3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	1 0 0		
0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0	0 1 0	0 1 0	0 1 0
2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0
0 18 0	until 5 July 0 18 0 after 5 July 0 9 0	0 9 0	0 9 0	0 9 0	0 9 0	0 9 0	0 9 0		0 9 0
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	2 0	0 1 0	0 2 0
0 1 0	0 2 0	0 2 0	0 2 0	0 0 0	0 0 0	0 0 0	0 1		
20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0
0 0 4	{ until 6 July 0 0 3 after 6 July 0 10 0 per cwt.	{ 0 10 0 per cwt.	0 0 0	0 10 0	0 10 0	0 10 0	0 10 0	0 2 4	0 10 0
0 0 2		0 10 0	0 2 4	0 2 4	0 2 4	0 2 4	0 2 4		

(continued)

ARTICLES.	1812.	1813	1814	1819	1823.	1824
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Vermillion.....the lb.	0 1 8	0 1 11	0 2 1	0 2 0	0 2 0	0 2 0
And further per cent. on Value	2 13 4	3 3 4				
Wax, Bees, unmanufactured.....the cwt	2 16 0	3 6 6	3 5 0	3 6 6	3 6 6	3 6 6
manufactured or bleached.....the cwt	5 4 0	6 3 6	6 2 6	6 3 6	6 3 6	6 3 6
the produce of and imported from a British Possession :						
unmanufactured .....the cwt.	2 16 0	3 6 6	3 5 0	3 6 6	2 6 6	2 6 6
manufactured or bleached .....the cwt.	5 4 0	6 3 6	6 2 6	6 3 6	6 3 6	6 3 6
And further per cent. on Values.....	2 13 4	3 3 4				
Wood, Teak, the load of 50 cubic feet	1 6 0	1 10 10	1 10 5	1 10 0	1 10 0	1 10 0
Wood, Teak, viz. fit for Ship-building, imported from any British Possession within the limits of the East India Company's Charter; the load of 50 cubic feet	1 6 0	1 10 10	free ...	free ...	free ...	free ...
imported from any other place within those limits .....the load	1 6 0	1 10 10	free ...	free ...	free ...	free ...
unrated and unmanufactured, per cent. on the Value	26 13 4	31 13 4	31 5 0	20 0 0	20 0 0	20 0 0
And further per cent. on the Values	2 13 4	3 3 4				
Wool (Cotton Wool) .....the 100 lbs.	0 16 11	0 16 11	0 16 11	0 8 7 until 5 Jan. 1820; after 5 Jan. 1820 46. per cent. on the value. 0 8 7 as above	6 0 0 per cent. on value	6 0 0
Imported from a British Possession	0 16 11	0 16 11	0 16 11		6 0 0	6 0 0
The Produce of and Imported from a British Possession the cwt.	...	...	...	...	...	...
Goods, Wares, and Merchandize, being either in part or wholly manufactured, and not being enumerated or described, or otherwise charged with Duty, and not prohibited to be imported into or used in Great Britain :						
For every £100 of the Value	68 6 8	81 2 11	62 10 0	50 0 0	50 0 0	50 0 0
Goods, Wares, and Merchandize, not being either in part or wholly manufactured, and not being enumerated or described, or otherwise charged with Duty, and not prohibited to be imported into or used in Great Britain :						
For every £100 of the Value	26 13 4	31 13 4	31 5 0	20 0 0	20 0 0	20 0 0
And further per cent. on Value.....	2 13 4	3 3 4				

11th August 1831

II.—FINANCE.—COMMERCIAL.

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1825.	1826.	1827.	1828.	1829.	1830.	1831.	1832.	Rates of Duty now Chargeable on like Articles the Produce of other Countries.	
								British Colonies.	Foreign Countries.
£ s d. 0 1 0	£ s d. 0 1 0	£ s d. 0 1 0	£ s d. 0 1 0	£ s d. 0 1 0	£ s d. 0 1 0	£ s d. 0 1 0	£ s d. 0 0 6	£ s d. 0 0 6	£ s d. 0 0 6
3 6 6 6 3 6	3 6 6 6 3 6	3 6 6 6 3 6	3 6 6 6 3 6	1 10 0 3 0 0	1 10 0 3 0 0	3 0 0 4 10 0	3 0 0 4 10 0	2 0 0 2 10 0	3 0 0 4 10 0
2 6 6 6 3 6	2 6 6 6 3 6	2 6 6 6 3 6	0 10 0 1 0 0	0 10 0 1 0 0	0 10 0 1 0 0	2 0 0 2 10 0	2 0 0 2 10 0		
1 10 0	1 10 0	1 10 0	1 10 0	1 10 0	1 10 0	1 10 0	1 10 0	0 10 0 from Africa.	1 10 0
free ...	free ...	free ...	free ...	free ...	free ...	free ...	0 0 1	1 10 0 except Africa.	1 10 0
free ...	free ...	free ...	free ...	free ...	free ...	free ...	0 10 0		
10 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	5 0 0	20 0 0
6 0 0	6 0 0	6 0 0	6 0 0	6 0 0	6 0 0	0 5 10 the cwt.	0 5 10	0 0 4	0 5 10
6 0 0	6 0 0	6 0 0	0 0 4 the cwt.	0 0 4	0 0 4	0 5 10	0 5 10		
...	...	...	...	...	...	0 0 4	0 0 4		
20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0
10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	5 0 0	5 0 0	5 0 0

JOHN LACK,
Clerk of the Rates.

APPENDIX,
No. 6.

APPENDIX, No. 6.

Petition
of Inhabitants of
Calcutta respecting
Duties on
Sugar and Rum

PETITION from certain European and Native Inhabitants of Calcutta, to the House of Commons, relative to the Duties levied in Great Britain on East-India Sugar and Rum.

To the Honourable the House of Commons of *Great Britain and Ireland*, in Parliament assembled.

PETITION of British and Native Subjects of *Great Britain*, Inhabitants of Calcutta and Places adjacent ;

Showeth :

THAT the duties levied in Great Britain on the Sugar and Rum of the Honourable East-India Company's territories in India are respectively 32s. per cwt. and 15s. per gallon, which at the ordinary market value (without duty) of 22s. per cwt. and 2s per gallon, is equal to an *ad valorem* duty of 145 and 750 per centum

That the duties on the sugar and rum of all other British settlements, including recent acquisitions of the Mauritius and Guiana, are respectively 24s. and eight and a-half shillings, equal as above to 109 and 425 per cent. only, independent of advantages from cheaper freight.

That your petitioners, not being aware of any just or politic grounds for the aforesaid preference and protection to their detriment in favour of other colonies, do humbly entreat of your Honourable House, that all such discriminating duties on the productions of their industry may be abolished, for the following, among other reasons too obvious to be intruded on your Honourable House :

1. That the national revenue would not suffer but gain by increased importation of colonial produce into Great Britain, though at a lower duty.

2. That the increased consumption would be a benefit and relief to the people of Great Britain.

3. That the advantage of the augmented interchange of productions between India and the mother country would be reciprocal, and even greater for England ; a position demonstrated by the prevailing rates of exchange.

When India sent cotton and silk manufactures largely to England, a pound sterling could be replaced to the British exporter by eight rupees realized in India.

Now that the cheaper manufactures of the mother country have superseded those of India, not only at home but on the spot, the British exporter must realize about twelve rupees here to replace one pound of his capital, because the means of furnishing returns in produce are not so scanty and out of proportion to the exports ; and the balance must be provided in dear bills or bullion, the most disadvantageous form of intercourse.

Besides other disadvantages of this state of the exchanges, it will be sufficiently plain to your Honourable House, that India is thus prevented from taking off the large quantity of British manufactures she would otherwise do ; whereby the home manufacturer is restricted from benefiting by the large field which would be open to him if India were enabled to buy, what she cannot do unless she can sell in return.

Therefore your humble Petitioners, craving speedy relief in the premises, will humbly pray.

(Signed)

NATHANIEL ALEXANDER,	G. J. GORDON,
H. C. SUTHERLAND,	JOHN STORM,
J. YOUNG,	RADLAPNANE ROY,
GEORGE PORTER,	RANGOPAL GHORE,
F. CAMPBELL,	MADEN MOHUN DOSS,
J. ASSOT,	

And about four hundred other Signatures, Native and European.

A true copy,

J. CRAWFORD.

APPENDIX, No. 7.

LETTER to the Court of Directors of the East-India Company, from the *London* Merchants connected with the *East-India* Trade, dated 13th October 1832.

Honourable Sirs:

We beg leave to lay before your Honourable Court, a case which appears to us to be one of considerable hardship to the Indian manufacturers, and to the India export merchants, in order that your Honourable Court may examine into the same, and grant the relief we solicit on their behalf and our own, as connected with the India trade.

2. Piece-goods manufactured in Bengal pay upon their entrance into Calcutta an inland duty of two and a-half per cent., and no drawback thereof is allowed upon exportation to the United Kingdom or elsewhere; whilst upon indigo, cotton, hemp, and tobacco, the whole inland duties are drawn back on exportation to the United Kingdom.

3. It may be presumed that this distinction was adopted at a time when the latter articles were considered in some measure the staple productions of India, and it was deemed expedient to give encouragement to the growers, and when the justice and policy of protecting the native fabrics was not so apparent; few, if any, British manufactures being then imported into India.

1. But now, when the British goods are imported largely into that country, on paying a duty of two and a-half per cent. only, and whilst the Indian manufactures are subjected to a duty of twenty per cent. on silk, and ten per cent. on cotton goods, upon their importation into the United Kingdom, it does appear to us, not only reasonable and fair, but a measure of wise policy towards the natives of India, to reduce, as much as may be practicable, so great an inequality in duties, which give so marked a preference in favour of British goods; and no relief could be more immediately applied, with so little sacrifice, as the concession of the drawback of the inland duty of two and a-half per cent. on piece-goods exported from Calcutta to the United Kingdom.

5. In proposing this course to your Honourable Court, we beg leave to call its attention to the policy of the British Legislature, by which a bounty is allowed on silk goods manufactured in the United Kingdom (whether manufactured from raw, or from foreign or British thrown silk), upon their exportation, of 3s. 6d. per lb. on all articles valued at 14s. per lb. and upwards, or say twenty-five per cent. on the 14s., being the supposed equivalent for the duties previously levied on the materials thereof: and we trust that the Honourable Court will see the justice, under the peculiar circumstances of India, of following the same policy towards the native manufacturers of India that the British Parliament has adopted towards British manufactures.

6. An application to the British Government to reduce the duties on the cotton and silk fabrics of India imported into the United Kingdom has not been successful, though signed by a very numerous body of the most respectable natives; and this disappointment would we think, tend to enhance the merit of the concession now sought for.

7. Having thus stated the chief points on which we rest the expediency of the measure we propose, we conclude by respectfully praying your Honourable Court to give early instructions to your Governments abroad, to allow the inland duty of two and a-half per cent. on piece-goods, the manufacture of British India, to be entirely drawn back upon their exportation to the United Kingdom.

(Signed)

We have, &c.

COCKERELL, TRAIL, and Co.
BARETT, COLVIN, CRAWFORD, and Co.
FLETCHER, ALEXANDER, and Co.
FAIRLIE, CLARK, JONES, and Co.
PALMER, MACKILLOP, and Co.
INGLIS, FORBES, and Co.

RICKARDS, MACKINTOSH, and Co.
SMALL, COLQUHOUN, and Co.
GLADSTANES, DRYSDALE, and Co.
R. SCOTT, FAIRLIE, and Co.
GREGSON, MELVILLE, and KNIGHT.

APPENDIX,
No. 7.

Letter from
London Merchants
to Court
of Directors,
13th Oct 1832

APPENDIX,
No. 8.
Return of
Raw Silk unsold

APPENDIX, No. 8.

A RETURN of all RAW SILK now in the EAST INDIA COMPANY'S Warehouses UNSOLD; stating the several Kinds, and the Dates of Importation; also the Dates at which they have been Offered for Sale, the Taxed Price at each Sale, and the Price at which last Offered; together with the Invoice Price of each Kind at the time of Importation.

FACTORY.	Bales Unsold.	Year of Import	Portion of Unsold Bales which have been offered for Sale, and Date when so offered.	Taxed Price at each Sale.			Taxed Price when last offered.			Invoice Price at the time of Importation.
				A.	B.	C.	A.	B.	C.	
COMPANY'S BENGAL.			Bales.	£.	£.	£.	£.	£.	£.	per lb. s. d.
	Bauleah ..	1830	165 { 20 June 1831	14	13	—	—	—	—	16 3
			24 Oct. —	13	12	—	—	—	—	
			20 Feb. 1832	12	11	—	20 Feb. 1832	11	—	
			24 Oct. 1831	14	13	—	—	12	—	
	826 { 1831	1831	20 Feb. 1832	13	12	—	—	12	—	15 6
			—	—	—	—	—	—	—	
			not yet offered	—	—	—	—	—	—	
			20 June 1831	15	—	—	—	—	—	
	20 { 1830	1830	24 Oct. —	14	—	—	—	—	—	15 4
			20 Feb. 1832	13	14	—	—	13	—	
			—	15	15	—	—	15	—	
			not yet offered	15	—	—	—	—	—	
	591 { 1831	1831	not yet offered	—	—	—	—	—	—	15 3
			not yet offered	—	—	—	—	—	—	
			24 Oct. 1831	—	14	—	—	—	—	
			20 Feb. 1832	—	13	—	—	13	—	
	25 { 1830	1830	24 Oct. 1831	—	14	—	—	14	—	15 1
			20 Feb. 1832	—	13	—	—	13	—	
			24 Oct. 1831	—	14	—	—	14	—	
			20 Feb. 1832	—	13	—	—	13	—	
	414 { 1831	1831	not yet offered	—	14	—	—	14	—	15 6
			not yet offered	—	14	—	—	14	—	
			24 Oct. 1831	—	13	—	—	13	—	
			20 Feb. 1832	—	14	—	—	14	—	
	3 { 1830	1830	24 Oct. 1831	—	14	—	—	14	—	15 1
			20 Feb. 1832	—	13	—	—	13	—	
			24 Oct. 1831	—	14	—	—	14	—	
			20 Feb. 1832	—	13	—	—	13	—	
	687 { 1831	1831	not yet offered	—	14	—	—	14	—	15 1
			not yet offered	—	14	—	—	14	—	
			24 Oct. 1831	—	13	—	—	13	—	
			20 Feb. 1832	—	14	—	—	14	—	
	559 { 1830	1830	not yet offered	—	14	—	—	14	—	14 8
			not yet offered	—	14	—	—	14	—	
			24 Oct. 1831	—	13	—	—	13	—	
			20 Feb. 1832	—	14	—	—	14	—	
	542 { 1831	1831	not yet offered	—	14	—	—	14	—	15 7
			not yet offered	—	14	—	—	14	—	
			24 Oct. 1831	—	13	—	—	13	—	
			20 Feb. 1832	—	14	—	—	14	—	
	542 { 1831	1831	not yet offered	—	14	—	—	14	—	14 3
			not yet offered	—	14	—	—	14	—	
			24 Oct. 1831	—	13	—	—	13	—	
			20 Feb. 1832	—	14	—	—	14	—	

APPENDIX,
No. 9 (1).

Memorial of
Mr. W. Felkin,
relating
to Bengal Silk.

APPENDIX, No. 9 (1).

MEMORIAL of Mr. WILLIAM FELKIN, addressed to the Right Honourable Lord AUCKLAND,
President of the Board of Trade, dated 7th December 1831.

A CIRCULAR of the Secretary of Government at Calcutta having invited communications tending to the improvement of the productions and manufactures of British Possessions in the East-Indies, your memorialist asks permission to state the following facts, which he presumes will, on receiving your serious attention, appear to you to warrant the conclusions which he has drawn from them, and to merit further inquiry and proof, with a view that, if found to be correctly laid down, experiments may be made in Bengal upon the production of silk; so that, if possible, that which is exported from thence may be equal in quality to that which we import from Italy, or to that which is produced in the best silk districts of France, and is found so important in sustaining the character of the manufactures of Lyons. These statements are the results of your memorialist's personal observations in the departments of Languedoc and the Cevennes in France; and in Piedmont, Lombardy, and the southern states of Italy, where he was engaged during two or three years in pursuing an inquiry into all the details of the growth of mulberry trees, care of silk-worms, and modes of reeling silk, on behalf of John Heathcoat, Esq. of Tiverton in the county of Devon: as also of the personal observations of a gentleman who visited Bengal with similar views, and who was sent out by the same principal. These observations have moreover been carefully compared with the statements of authors of standard works on the subject, as relates to the European as well as the Indian production of silk. Your memorialist further begs to mention, merely in proof of his having some experience in the art of preparing silk, that he procured a female to be instructed in reeling cocoons in France, and having brought her to England, in the winter of 1825, she taught twenty-four others, and he superintended their reeling, at Tiverton, 35,000lbs. weight of Florentine cocoons, which he had previously bought in Italy and shipped from Leghorn; and the silk produced in this first English filature was afterwards worked into bobbin-net lace, in Mr. Heathcoat's factory. Nevertheless, he is not at present in any way connected with or interested in the production or sale of silk.

All persons who are conversant with silk know that between the quality of the best and worst silks of Europe there is much difference, and that this chiefly results from greater or less care and skill in reeling, although it is in some part owing to the original difference in the cocoons. The same diversity exists in the silks of India, which explains the difference in the prices of silks of the Company's filature and those of private reeled silk. But any one used to reeling silk, who has examined the cocoons of each continent, will at once see that the great reason why Bengal silk has been hitherto inferior to European is the inferiority of the Bengal cocoons; they are much smaller, much more flossy, softer made, and of a much finer thread. All these are evil qualities in this affair; and as good cocoons are the basis of good silk, it is proposed to show, that,

Bengal cocoons are thus inferior;

They may, most probably, be produced equally good with those of Europe;

This being effected, they might and doubtless would be reeled into far superior silk to that at present produced in India; and

That the costs, of such silk would be so much less than that at which silk can be produced by the investment of capital in Europe,* as to lead, in the event of such amelioration, to our supplying silk to an immense amount to other nations.

The

* In France and Italy there are many cocoons produced by the peasantry, at no cost of capital or labour but that of gathering the leaves of mulberry trees themselves have planted by the roads or on waste places, and superintending the worms. This circumstance renders the distinction made above necessary.

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No. 9(1).continued
Memorial of
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relating
to Bengal Silk.

The superiority of European cocoons will appear from the following details:—It takes on an average 250 French cocoons to weigh 16 oz.; 950 of Bengal. It takes of the worst kinds, in France, 14lbs. of cocoons to reel into 16 oz. of eight to ten cocoon silk, and of the best, 10lbs. for 16oz.; of the Bengal worst, or rainy crop, it takes 22lbs. to 24lbs., and of the best, 15lbs. to 16lbs. to produce 16oz. of silk. In France and Italy the girls reel per day, of three to four cocoon, 10oz. of silk; of eight to ten cocoon, 16oz.; and of 18 to 20 cocoon, 24oz. In Bengal, of fine silk they reel per day 5oz.; middle, 8oz.; of coarse, 11oz. a day on the average, except in the rainy season, when the quantity is less. The English gentleman before mentioned, writing in 1827, from Santipore, says, "The exhibition of the parcel of Italian cocoons I brought out, I may truly say, astonished the natives." This difference in the weight of the Bengal cocoon, its unproductiveness in reeled silk, even in proportion to its diminished size, and in the quantity reeled per day, when every allowance is made for inferiority of work-people employed in reeling, can only be fairly attributed principally to the inferiority of the cocoons, and of the worms that produced them.

I go on to illustrate the practicability of substituting a production of equally good cocoons with those of the continent of Europe for these inferior ones. There are four or five kinds of silk-worms known to the silk producers in Bengal, each of which allows of reproduction every eight or ten weeks; and there is one annual silk-worm kept, but only to a small amount, and its cocoon is not better than that of the others. On account of the facility of reproduction, the mulberry tree admitting of so many crops of leaves annually, some one or other of the four or five first-mentioned species of worms are usually preferred there. In France and Italy, except in Naples, there is but one production or hatching of worms each year; at Naples there are two, but these are of eggs retarded in hatching for this purpose, produced by an annual worm. There are several species of worms known and kept in those countries, some making a larger and some a smaller cocoon, but all of them far superior to that of Bengal. Now your memorialist humbly presumes to recommend that an immediate trial be made in Bengal of hatching good French or Italian eggs; and as it is believed that the breed of worms kept at Novi, in Piedmont, cost no more than any other species in food, yet produce cocoons of which five will give as much silk as eight of ordinary French or Italian cocoons (though this is not known to your memorialist from personal observation), he would choose the eggs of that breed, in conjunction with those of the other most approved ordinary European kinds, and if the cocoons prove equally large and well made with those of France or Italy, he proposes to substitute them for the reproduction of eggs, until the whole production be of these superior cocoons. The food of the worms on the continents of India and Europe is the same; and although the difference in the care and skill of those who rear the worms will produce some difference in their health, and consequently in their cocoons, yet that is trifling compared with the difference which at present occurs in the cocoons, and which may be traced up to the fact that they are made by worms of very different species.

The following facts are cited in support of his view of this important subject:—Your memorialist brought over French eggs, in 1825, to Tiverton, where they were hatched in the factory of Mr. Heathcoat, and fed on the black mulberry leaf, which is not so suitable nor healthy food for them as that of the white mulberry, the ordinary and proper food for the silk-worm. They had only common attention, and were subjected to very various degrees and vicissitudes of heat; their course was somewhat protracted beyond the time they ordinarily live in the warm climates, where, in exact proportion to the quantity of food they eat, and degree of heat which they live, their course is prolonged or contracted, but their cocoons are not materially affected by these circumstances. The result was, that nearly as many lived and produced cocoons as the average of Italy, and the cocoons (which were as good in all respects as those of Italy) I reeled into silk, with the ordinary facility, and subject to only the ordinary waste; and which was subsequently worked into bobbin-net lace, of clear, even, and good quality. Again, this year, the undersigned hatched Italian eggs in his warehouse in Nottingham, and also those of the worm long known and acclimated in England. They were fed alike on the black mulberry leaf, the white trees not being within his reach, and alike exposed to the very various vicissitudes and degrees of heat which

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occurred during their course. They produced an average number of cocoons: those of the English worm were larger, and rather heavier than those of India, but only about a fourth part as heavy as those he obtained from the Italian eggs, which indeed were as good and heavy as the ordinary production of Lombardy. These experiments have sufficed to convince him that the sentiments of a French writer, well versed in this production, are correct, viz. "That, unexposed to the destroying influence or rigour of climates, as they affect the external air, by being kept (for all useful purposes) in houses or other enclosed places, it is a gross error to suppose that the health of silk-worms, and growth of good silk, depends entirely, or even mainly, on the recolt taking place in any particular latitude." And he would submit, that if by feeding the worms upon comparatively inferior food, without taking any extraordinary pains, and in the more variable and uncongenial climate of England, he has experienced no failure nor difficulty in producing good cocoons and good silk, there is fair ground to expect the like results would follow the attempt in Bengal, if made by competent and unprejudiced persons. He will cite a case exactly in point, in further support of the above proposition, which cannot fail to have much weight in forming your judgment of its feasibility and importance.

Previously to the year 1802, all the white silk used in France was either reeled from the dingy white cocoons always found in the yellow produce, and which is never a good colour, or imported principally from China, the colour of which is excellent, but irregularly reeled. The Lyonese silk manufacturers having represented to their government the importance of producing the really superior white cocoons, that would furnish them with the means of obtaining an even and clean, as well as fine and beautiful white silk, Napoleon caused a premium of 10,000 francs to be offered for such silk the produce of worms bred in France, and capable of being reeled into three-cocoon silk. M. Bonnard, a silk grower of Alais, chief town in the department of the Cavennes, obtained the eggs from the east, bred the worms without any difficulty on his premises, and in twelve months received the prize. Since which time many others having obtained the eggs from him, the product has become general, and the Lyons market is regularly supplied with three-cocoon silk, of colour, evenness, and cleanness superior to any formerly known, and which has given those manufacturers a decided preference in the articles of white gauze, or others which require to be made of fine white silk. What M. Bonnard had done so successfully, and with such useful results, first led your memorialist to the plan he proposes:—just to reverse this operation; and taking eggs from France or Italy, to replace those ordinarily used in Bengal. There seems but one objection which may prove important, i. e. the European worm being annual, whereas the Bengal grower needs a succession of four or six hatchings each year; but this, it is apprehended, may be obviated by the practice of postponing the hatching of the eggs, by keeping them cool until the time they are wanted, as is done in Naples, for their second recolt.

If, then, such cocoons were produced in Bengal as are in the European silk districts, it is proper to point out why it may be reasonably expected that they would be reeled into much better silk than that at present received from thence. The thread of each cocoon being thicker, would require fewer to make the requisite sized silk, and those would be more easily counted; for the same reason each thread or end of silk from the cocoon would be stronger, and break less frequently; they would therefore run off with ease* as well as regularly, and the better made the cocoon, the less foul, knobby, and liable to burs would be the silk. The attention of the reeler would be more efficiently directed, being less distracted by the greater number and more continued breaking of the ends in each thread, and the requisite throwing up of new ends to replenish it, and thus would be enabled to go on with much less waste of time and silk and labour than at present, and in consequence be able to increase the amount reeled. This would be a very important saving in reduction of the cost of Bengal silk; and when combined with that resulting from the difference in the cost* of feeding

* The calculation of reduction in prime cost is thus made:—Of the best French cocoons there are used, on an average, 2,500, and of the worst 3,500, to produce sixteen ounces of middle-sized silk. Of the best Bengal cocoons on an average 14,250, and of the worst 21,850, are used to produce sixteen ounces of middle-sized silk.

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continued.

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feeding the worms, and an important reduction in the cost of the thicker silks—which may be realized by reeling them on Mr. Heathcoat's patent plan,* which ensures as perfect regularity and cleanness in a twenty-four as in a five-cocoon silk, yet gives the extra quantity per day, and of course at so much less cost in the reeling,—it is humbly presumed bears out my last statement, that the cost of producing silk would thus be so much reduced in Bengal, and its quality so much improved, as that it would enable us to supply other nations with a vast amount of silk, instead of drawing so large a portion of our supply from them as it is well known we are obliged annually to import at present.

When it is considered that the cultivation of the mulberry tree in Bengal, even under the existing discouragements of a high prime cost and a low selling price of the silk, is sufficiently probable to allow of land thus employed being always let for a higher rent, in most cases double, and in some situations, proximate to extensive and favourite filatures, quadruple the common rent of land in the same neighbourhoods; that in rearing silk-worms all the peasant's family may be and commonly are employed; and that few situations, whether of mountain or plain, in India, but are eligible for the growth of the mulberry trees and rearing the worms, thereby offering unlimited means of increasing the quantity of silk that might be exported from Bengal, while the whole amount of the demand for silk is continually increasing in Europe: your memorialist hopes that the importance of endeavouring to improve the quality and increase the quantity of Bengal silk will justify his praying that inquiry made be made into the subject generally, and into the matter of this statement in particular: and he humbly offers, for the use of those who might be appointed for this purpose, a copy of his manuscript journal of facts and observations on the culture of the mulberry-tree, care of the silk-worm, and process of reeling silk, daily made at Alais and elsewhere, in the years 1824-5-6; and he is desirous of communicating, if required, any further information he may possess upon these subjects.

And your Memorialist, &c.

Nottingham, Dec. 7, 1831.

WILLIAM FELKIN.

APPENDIX, No. 9 (2).

NOTE on Mr. FELKIN's Memorial.

APPENDIX,
No. 9 (2).

Note
on Mr. Felkin's
Memorial.

THE white mulberry, which is alone† used in France and Italy, grows in India, but is not used in feeding worms. That which is alone used for this purpose is in husbandry, and botanically

The actual cost of French good middle-sized silk in 1825 was 16s. 6d. per lb. of sixteen ounces. This was exclusive of profit. It is not probable that the rent of land, price of cocoons, or rate of wages, could be materially reduced in those European districts where the mulberry-tree is cultivated.

It is stated in a work printed in Bengal in 1803, that "the prime cost of filature silk, shipped for Europe, need not be above 10s. 6d. for sixteen ounces." In 1827, I learned the cost of Company's silk was supposed to be on an average 16s. rainy crop for sixteen ounces, and 13s. the best; and the native reeled silk to be 12s. for rainy and 10s. for best per pound.

The cost of feeding the worms which make the cocoons necessary to produce the sixteen ounces of good silk, would be reduced to one-fourth, each making a cocoon after eating only as many leaves such as would give the silk that four can now be made to produce. The saving in reeling the same sized silk would be, according to the season, from 6d. to 1s. the pound; that process costing in Bengal from 1s. to 2s. the pound. Your memorialist has therefore no doubt that the best silk might be exported from Bengal, in any quantity the European demand might require, at half the present cost of the worst we receive from thence.

* It is an important fact, that at present fine and costly silks are doubled into much thicker ones, at great expense and waste, merely to obtain regularity in the thread, for many purposes where the throw or twist is worse than useless.

† See the evidence of Mr. Saunders, in the Report of 1831, and the statements given in the same Report respecting the species of mulberry which grow in India, or are used in feeding worms.

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continued.
Note
on Mr. Felkin's
Memorial

botanically, a distinct plant: it is the *Morus Indica*. The white mulberry takes twenty years to come to its full growth, and lasts seventy or eighty years; the leaves cannot be stripped with safety until it is five years old, and perhaps ought not until it is seven; the leaves are large and succulent. The Indian mulberry, instead of five or six years, may be stripped in six or seven months after the slips are planted; the leaves are comparatively small, dry, and rigid. Five different kinds of silk-worms are fed in India, but chiefly one, supposed to be a native of the country, which breeds five times a-year. One of the five worms is an annual, and supposed to have been originally imported either from China or Italy; most probably the latter. Both the mulberry and worm at present in use in Bengal are peculiarly suited to the petty capitals and slothful habits and rude industry of the people: the great probability is that good large cocoons, equal to the French or Italian, will never be made from the Indian worm and Indian silk. Better cocoons are at present made by the annual worm than the common one, but still far inferior to French and Italian. I take it that the white mulberry must inevitably be cultivated before fine cocoons can be produced, and this can only be effected by the settlement of Europeans, and eventually, in imitation of these, as has happened with good indigo, by large native capitalists. It is quite hopeless to expect that an ordinary Indian peasant, who lives from hand to mouth, should be able to cultivate a plant which can afford him no return for five years; and breed a worm which produces but once a-year, when he has one at hand which produces five times. The Indian peasant lives by no kind of husbandry that will not afford him a return in from six to ten months; even in this country, a market gardener, a man of a far superior order to an Indian peasant, must have all his fruit trees planted for him by the proprietor of the land. The East-India Company has little or nothing to do with the production of silk beyond making the advances to the cultivator or feeder of the worms, and the introduction of the Italian filatures, which however are entirely superintended by natives, for gentlemen of the class composing the Company's commercial agents cannot be possessed of the necessary skill, practice, and diligence for superintending the details of the business. It is sufficiently known that the production of silk is a complete monopoly in the hands of the Company; and the fact stated in the memorial, that the rent of mulberry lands is four times as great as that of ordinary lands of the same quality, is an incontestible proof of it. There could not be two rents for the same description of lands in the same country, without the existence of a monopoly. It is this high rent which has raised the price of Indian silk, without, as was shown by several witnesses before the Committees on Trade, in 1820-21, having improved its quality. A Calcutta price-current of 1780, which is within eight years of the establishment of the Company's silk filatures, affords the following results, when compared with a price-current of 1831:

		1780.		1831.	
Per Ser :		Ra.	a.	Nat.	Comp.
Cossimbazar	.. ..	7	4	12	0
Radragore	.. ..	8	12	10	1 10 12

There is no argument in favour of the absolute necessity of granting to Europeans the fee simple of the land more cogent than the present condition of the silk trade; without this indispensable step, India will never be in a condition to afford a cheap and abundant supply of good raw silk; and without it, consequently, the silk manufacture of this country will never be in a condition to compete fairly with those of France and Italy. Such an experiment as that proposed by Mr. Felkin would be valuable as a trial; but what use would a mere experiment, however successful, serve, if the law interfere, as at present, to prevent its practical and extensive utility?

APPENDIX, No. 9 (3). *

LETTER from Mr. W. FELKIN to the Right Honourable CHARLES GRANT, President of the Board of Commissioners for the Affairs of India. *

Sir :

Nottingham, 24th April 1832.

IN availing myself of permission to address further communications to the Honourable Board over which you preside, upon the growth of silk, I shall notice some objections which Mr. Villiers did me the honour to communicate some time since, relating to my memorial presented to you on this subject; and I also propose, with your permission, to append certain remarks, which I think are calculated to illustrate and enforce some of the statements before made; and which, if transmitted to parties in India competent to enter into the details, may afford some useful hints towards improvement in this important branch of industry.*

It is urged as an objection to making the experiment I have desired, viz. that of introducing European worms into Bengal, that, "although valuable as the means of ascertaining a fact, yet it would be useless, even if successful, while the existing law of India precludes Europeans possessing the fee-simple of the land, and thus interferes to prevent any extensive practical result in the case supposed."

It is also urged, "that the leaves now used in India are not those of the white but of the Indian mulberry, and that the former must be used to obtain good cocoons; yet it is assumed that the latter only will admit of slip or layer planting, and early plucking; and as it is said that the former takes five to seven years' growth before it could be plucked, it is beyond the means of the Indian peasant either to plant or employ." Upon these passages, which appear to be the substance of the objections alluded to, I would offer the following remarks for your consideration.

In my memorial I purposely avoided any reference to political impediments, as well as to those arising from the habits, character, and circumstances of the natives of India, which might be supposed to stand in the way of improvement in the culture of Bengal silk; presuming then, and still believing, that none of these would prove more formidable barriers to improvement than they had been found to present in the growth of Bengal indigo. The Indian Government has invited suggestions of improvements, and has thereby virtually given a pledge to afford every facility for carrying them into effect, so far as can be granted consistently with the general good.

It is probable that the free settlement of Europeans, and the use of their capital and skill, will be necessary to ensure the highest amount of excellence in this or any other product of India. Nevertheless, if it were proved that as good cocoons could be obtained there as in Europe, and at much less cost, what is it that should impede an immediate effort to commence the course of improvement?

Although all the writers I have consulted* have made the assertion that the white mulberry leaf was used in Bengal as food for the silk-worm and not the Indian variety, yet it is probably true, as stated by Mr. Saunders,† that the leaf of the latter is alone used. It must however be remarked that the white mulberry grows in India, indeed it will grow very well in the hottest and in the coldest climates; and a multitude of French works prove that for ages this species was often planted in France in somewhat the Indian manner, was cut annually to the ground, and plucked even the first year. It will bear this as well as the Indian

* See Mayet, Rozier, Pulein, l'Abbé des Sauvages; and lately, *Gardner's Cyclopædia*, article Silk Manufacture, p. 95.

† See Evidence of this gentleman and others on East-India Affairs, before Committee, 1831.

Commercial.

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continued.

Letter from
Mr. W. Felkin to
the Right Hon
C. Grant,
24th April 1832

Indian (which, with every other known variety of the mulberry, is cultivated in the botanical gardens of Paris and Lyons), and the shoots of the white are, of the two, most rapid in growth and equally garnished with leaves: I have therefore no doubt it might be substituted at once for the Indian variety, in the plantations of Bengal. But it is justly supposed in the objection, that the white would not bear much plucking before five or seven years of age, if intended for a standard tree; neither would the Indian; and it may well be queried if any species of trees would thrive and become standards if plucked very early. The French have found long since that standard mulberry trees are eventually more useful and economic than the bushes, hedgerows, or layers; they take up less ground, as they may be planted at certain distances in common fields or meadows, and the intermediate spaces (except plots of three or four feet round the bole) may be used for any other agricultural purpose: or, which is more important, they may be, and often are planted in the mountains, where scarcely any other use can be made of the ground they occupy; or by the roads; and indeed in any vacant space. Thus in a few years they become the means of subsistence to the poor, at a most trifling expense.

Now I humbly submit that it is quite as practicable, and would be found as profitable, for the Honourable Company to make an outlay by causing white mulberry trees to be planted, as by making advances in money to the breeders of worms: and this is especially worthy its notice, because on this plan the hilly districts of India, where hitherto, I believe, this production has not been attempted, but which certainly are well adapted for its extension, might soon be stocked with trees enough to supply food for silk-worms for centuries to come. The first white mulberry tree ever planted in France flourished near Montelimart till towards the end of the last century: and they would grow with as much luxuriance and attain as great longevity, after yielding the same proportion of leaves, on the plains of Bengal as on those of Dauphiny.

It appears that for a series of years the price paid by the agents of the East-India Company for cocoons, and by consequence the prime cost of their silks, have borne, in fact, no relative proportion to the cost of leaves or of rearing silk-worms. Such a state of things calls for and admits of beneficial alteration. No production can ever succeed or extend as it ought while in such an extraordinary predicament. The Honourable Company will no doubt look to this, and any further reference by me to the question would be, I conceive, impertinent to the present inquiry, which is simply to ascertain in what manner, with ordinary facilities, good cocoons, and of course good silk, may be produced in India. I shall merely add that it is uncertain from whence the annual worms came which are said to have been recently introduced; but from an inspection of their cocoons I am fully assured they were not brought from Europe. I therefore still humbly hope for the approbation of your Honourable Board, to my first suggestion of an experiment, by the importation of properly chosen European eggs, and breeding worms from them. But I would prefer the supplementary request, that part of the worms hatched from the eggs be fed on white and part on Indian mulberry trees.

I now respectfully offer the additional details in explanation and confirmation of my former memorial; being Remarks on the production of European Raw Silk, written in 1826; to which praying your attention.

I am, &c.

W. FELKIN.

REMARKS on the Production of European Raw Silk, written in 1826.

In inquiring into the production of raw silk, attention may be properly directed to the cultivation of the mulberry trees; the care of the worms, and the amount and quality of their produce; the winding of the cocoons; ameliorations already introduced; existing prejudices and difficulties; and proposed improvements.

European

European silk may be properly classified as produced in the following districts, viz.:—Mountainous France; the plains of Dauphiny, &c.; Piedmont and Nice; the Milanese; Tuscany; Roman States; Neapolitan States; Spain.

The *Morus Alba*, particularly that preferable variety *Morus Italica* (*Murier d'Italie*), rose mulberry, is almost the only kind planted throughout Europe for producing the food of silk-worms. In its culture the principal objects are the quality and quantity of leaves. The coldest districts seem, from various causes, to be most remarkable and appropriate for its growth, whether as it regards skill and care in planting and pruning the trees, or the relative quality and quantity of leaves produced. The greatest amount of success has attended the cultivation of the mulberry tree in mountainous, dry, and barren districts. The following proportion may be stated as near the truth; in reference to the produce of the mulberry trees in the following European silk districts: a given number of trees produce in

Mountainous France	...	...	100 lbs. leaves.
Piedmont and Nice	...	...	85 —
Plains of France	...	...	75 —
Milanese	...	...	75 —
Tuscany and Roman States	...	...	65 —
Neapolitan	...	...	60 —

Of these, Mountainous France and Piedmont produce leaves in the highest degree nutritious. Those of the Plains of France and of the Milanese seem to possess the necessary silky aliment in ten or fifteen per cent. less amount than the former; while those of Tuscany, Naples, &c. are twenty to thirty per cent. less nutritious than the former. A certain proof of the difference in the quantity of leaves produced by trees in these respective districts is found in the greater or less number of trees necessary to feed a certain number of worms: and we have a proof of difference in the quality of the leaves, in the greater or less weight consumed in producing a certain quantity of cocoons. The causes of these differences probably are, that trees succeed well in proportion to the purity of the air, the soil on which they are grown being more or less light and dry, and kept free from weeds or other vegetable matters. Each plucking of the leaves should be succeeded by careful pruning; and as standard trees are preferable, on account of longevity, productiveness, and the greater adaptation of their leaves to the health of the worms, they should be kept quite open in the centre of the head of the tree, by which mainly they are preserved from disease.

Human labour and skill are most easily obtained and applied to this cultivation, following the gradation above marked out in the respective silk districts.

France had in 1825 sufficient young mulberry trees planted to double its supply, if necessary, in ten years. Piedmont might increase one-half in ten years, and the Milanese the same, from trees already planted. The rest of Italy was stationary.

It is found in France, that the grafting on the wild stock tends much to the superiority of the leaf, both in respect of the health of the worm, and the quality of the silk. The two most fatal diseases, with which when worms are affected they are called the "Gras," or the "Jaune," may usually be traced to gross, overheated, or damp leaves.

For every 1,000,000 lbs. weight of raw silk produced in France, it is calculated that 250,000,000 lbs. weight of leaves are consumed, and that 5,000,000 trees, of the average age of thirty years, are stripped once each year to furnish them.

In breeding silk-worms the essentials are, a sufficient supply of heat, fresh air, and recently gathered dry mulberry leaves. European récolts succeed best in the hands of persons who invest money in them for the sake of profit; but the largest proportion of the worms are fed by peasants on their own account, as an additional means of support; and owing to the little space their dwellings afford, they only get to spin, on an average, as follows, upon the scale of an ounce of eggs hatched, or 33,000 (more or less).

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No. 9 (3).
continued.

Letter from
Mr W. Felkin to
the Right Hon.
C. Grant ;
24th April 1832.

		Worms spin.	Making cocoons:		In which worms spin.	Making cocoons.
In Mountainous France, in which $\frac{1}{2}$ are chamber recoits, and in these for each oz. hatched	...	20,000	85lbs.	and $\frac{1}{2}$ cottage recoits, 12,500	55lbs.	
In Piedmont, in which $\frac{1}{2}$ ditto	...	13,500	80	and $\frac{1}{2}$... ditto	...	11,500 50
Plains of France $\frac{1}{2}$ ditto	...	13,500	60	and $\frac{1}{2}$... ditto	...	10,500 45
Milanese ... $\frac{1}{2}$ ditto	...	16,500	70	and $\frac{1}{2}$... ditto	...	10,500 15
Tuscany and Roman States ... $\frac{1}{2}$ ditto	...	11,500	50	and $\frac{1}{2}$... ditto	...	9,800 40
Neapolitan States 0	...	...	...	all ... ditto	...	9,200 40

The price of cocoons is highest in those countries where the recoit is best. The respective prices of the recoit of 1825 (which was below an average one), for ordinary fair parcels, Douppions and Chiques inclusive, were,

Mountainous France	...	...	for 16 oz. English	1s. 6d.
Piedmont, Plains of France, and Milanese	...	...	ditto	1s. 4
Tuscany, Roman States, and Naples	...	...	ditto	1s. 0
Calabria	...	...	ditto	0 10
Spain	...	...	ditto	1 2

The weight of silk produced in the year 1825, in the respective districts, and the average prices of fair silks, were as follows :

Mountainous France	...	750,000 lbs. of 16 oz. English	at 24s. per lb.
Piedmont	...	1,440,000	ditto ... at 23s.
Plains of France	...	850,000	ditto ... at 20s.
Milanese	...	2,652,000	ditto ... at 18s.
Tuscany	...	100,000	ditto ... at 16s.
Roman States, supposed	...	500,000	ditto ... at 17s.
Ditto Eastern ditto,	...	500,000	ditto ... at 24s.
Naples	...	100,000	ditto ... at 18s.
Calabria	...	300,000	ditto ... at 12s.
Spain,	amount unknown to me.		

In consequence of new light being thrown upon the management of recoits within a few years, those of Mountainous France, and of the Milanese, have been much improved, and are increased full one-third; those of Piedmont, and of the Plains of France, are stationary; the production of silk in the other districts seems to have somewhat declined, probably owing to political causes.

In the reeling of cocoons care and skill produce the chief difference in the value of the silk; it is however to be remarked, that the best cocoons are certainly the Piedmontese; those produced in the mountains of France are scarcely inferior; the other districts produce them of nearly equal quality to each other, but all are inferior to the above. The excellence of the silk reeled in the higher districts of France has obtained for it a great demand in the French market, and this would probably be much larger were the English market open for its sale. The nerve of Piedmontese silk, and that of Fossombrone, has mainly contributed to keep up their price: this quality is however shared by the silk produced in all mountainous districts. The high priced silks are principally reeled in filatures; the lower by the peasantry.

Improvements have taken place in reeling cocoons in the higher parts of France, within the last twenty years, which surpass the progress made in the previous two centuries; these consist principally in the increase of filature reeling and carefully sorting the cocoons, and giving regular instruction to the hands. The reels are generally turned by power,

power, and the water is heated by steam; double threads* are avoided, and thus regular fine silks are produced with great advantage.

Reeling is somewhat improved in the Milanese by the application, to a certain extent, of the same means as in France.

Improvements in the manner of cultivating the trees have been generally and effectively introduced in the mountainous districts of France, and in Piedmont, where they present a striking contrast to the ill-conditioned standard trees of Dauphiny, Lombardy, and the southern Italian States.

The peasantry engaged in breeding silk-worms in the various districts of Europe, have as yet made but little progress in improvement. The larger chambers often present great skill and attention in the requisite details; the rooms built for this purpose are now larger, more airy, and arranged so as to produce a great circulation of air suddenly. Great cleanliness, and giving the worms dry food, have been attended with the happiest results. The peasantry however, living in the higher ranges of the hills, often bring down for sale excellent samples of cocoons.

The progress of the production of silk in France has been considerable :

In 1789 it was	...	...	...	...	1,000,000 lbs.
* 1820	...	...	...	...	1,350,000
* 1825	...	...	...	...	1,600,000

The consumption in 1825 was about 3,000,000 lbs. ; which quantity, and of sufficiently good quality, she may probably have within herself the means of producing by the year 1840, if necessary.

Prejudices are very general on several important points ; as for instance, in favour of lopping off large branches from trees, instead of small and frequent prunings ; to let the trees grow in grass meadows, or amongst corn, without digging around the roots, as is necessary six or eight times during the year. The loss of leaves from these causes has been estimated by some so high as a third of what might otherwise be obtained. The poor suffocate often, and almost always weaken the worms they breed, by subjecting them to an occasional close heat. It is difficult to make them understand that confined air may kill the insects at seventy degrees, but that they may remain healthy, if the air be in circulation, though the actual heat be ninety degrees ; this accounts for a large proportion of the extra loss in the peasants' breed of worms. This class conceive they gain by reeling their own silk ; they lose, in fact, ten per cent. at least. The reeler by profession does not gain more than from ten to fifteen per cent. after he has paid all expenses and run considerable risks, although he produces from similar cocoons a far superior article.

The owners of filatures have a great prejudice against reeling longer than during the months of July, August, and September ; certainly this period might be considerably extended without injury to the cocoons or the silk, and with great advantage to the persons employed. It is possible, also, to reel at less speed than is usual, if increased care and time be desirable. But the most important error, and one that has hitherto universally prevailed, is that which supposes all coarse reeled silks must be necessarily irregular also. Now it is just as possible to produce a coarse even thread as a fine one ; and the advantage gained by reeling even thick silks must be apparent to those who know the waste and expense attending throwing fine silks to be used for various purposes, where even thick silks are necessary, and which must be superadded to the increased cost of reeling fine silks.

The following are some further particulars of this production, in the respective districts above named :

Good

* This greatest evil in reeling silk is avoided by two knife-blades being so placed, as that the moment one thread breaks, and by consequence the other would pass on the reel double from the croisée, it must strike on the knife-edge on that side, and at sufficient angle to cut it ere any has got on the reel.

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No. 9 (3).
continued.

Letter from
Mr. W. Felkin to
the Right Hon.
C. Grant;
24th April 1832.

Good sorted cocoons have cost in France, on an average of years, 1s. 6d. per lb. English; the female who winds (fileuse) is paid 1s. 3d. per day; the girl who turns, 10d. per day; the universal hours for work are from four in the morning till eight in the evening, giving fourteen clear hours labour; 10d. per day each basin is about the sum commonly allowed to cover the other expenses of reeling.

These two last observations hold good throughout France and Italy. In France two skeins only are reeled at a time from each basin; the average weight produced is 18 ounces per day; about one-half the 1,600,000 lbs. is reeled by peasants, who produce one pound of silk from about 14 lbs. of cocoons; the other half is reeled in filatures, and one pound of silk is obtained from 12 lbs. of cocoons. The profit on reeling silk in filatures, in most parts of France and Italy, seems to be about 12½ per cent. The price of cocoons is regulated in each district by the price of the silk ordinarily produced therein; and which is of course controlled by its quality and the character it bears in the market.

Those who reel silk largely generally deal in silk, and calculate their profit will arise from two sources: the purchase of the parcels of cocoons from the small breeders, and from their throwing their best silks themselves, and thus obtaining for them the highest price of the market. The import of silk into France in 1825 was 2,200,000 lbs. About three-fifths of the consumption of France is used in tram and singles, and two-fifths in organzine.

These calculations on the silk productions of France accord with the opinions and observations of MM. Delon and P. C. Longue of Lyons, and Tessier of Vallerogue, dept. des Cevennes; who it is presumed are, from their long and extensive experience in reeling for and selling silk in the Lyons market, unquestionable authorities.

A statement is herewith given of the prices paid for cocoons by M. Tessier, at Vallerogue, from 1798 to 1825, and their product:

Poid de Vallerogue, dont 150 lbs. font 62 kilogrames:

Années.	Qualité.	Prix, Sols.	Quantité de Cocons pour une Livre de Soie.
1798	... grosse soie ...	18 at 19	... 10 lbs. 15 oz.
9	... de 20/25 deniers ...	18 — 19	... 10 — 13 —
1800	chiques and douppions	22 — 24	... 11 — 6 —
1	... compris ...	31 — 33	... 11 — 9 —
2	... — ...	33 — 36	... 11 — 0 —
3	... — ...	30 — 32	... 10 — 14 —
4	... — ...	29 — 30	... 11 — 1 —
5	... — ...	35 — 36	... 11 — 6 —
6	... — ...	30 — 31	... 11 — 3 —
7	... — ...	31 — 32	... 10 — 9 —
8	... — ...	30 — 32	... 11 — 4 —
9	... — ...	25 — 28	... 10 — 12 —
1810	... — ...	35 — 37	... 10 — 11 —
11	... — ...	22 — 24	... 10 — 8 —
12	... — ...	25 — 27	... 11 — 0 —
13	... — ...	26 — 27	... 11 — 0 —
14	... — ...	29 — 30	... 10 — 13 —
15	... partie grosse soie ...	29 — 31	... 11 — 8 —
16	... partie soie fine ...	40 — 41	... 11 — 7 —
17	... — ...	46 — 52	... 11 — 3 —
18	... — ...	57 — 59	... 11 — 0 —
19	... — ...	36 — 38	... 11 — 10 —
1820	... — ...	32 — 34	... 11 — 12 —
21	... — ...	33 — 34	... 11 — 12 —

Années.	Qualité.	Prix, Sols.	Quantité de Cocons pour une Livre de Soie.
1822	... partie soie fine	36 — 40	12 lbs. 3 oz.
23	...	27 — 32	11 — 10 —
24	...	29 — 32	11 — 14 —
25	...	36 — 40	L'on ne connoit pas encore le resultat de 1825.

En distrayant les douppions et chiques il faut alors 2 lbs. de plus de cocons par livre de soie fine.

En l'année 1824, 914 quinteaux, 4 lb. 8 oz. de cocon, ont produits de belles soies ... 6,770 lbs.

Douppions	...	794 lbs.	5	} 7,700 lbs.
Chiques	...	135 lbs.	13	

En divisant les 6,770 lbs. belles soies par la quantité de cocons achetées, alors il a fallu 13 lb. 8 oz. de cocons pour 1 lb. belles soies.

In Piedmont the cost of cocoons averages, as in France, 1s. 6d. per lb. English; fileuses and tourneuses are paid the same as in France, when they live at their own homes; but, as in France, they are sometimes provided with a rug and lodging-room, and with very coarse food; in these cases the saving is not great, as they are not so expert and attentive; two skeins only are reeled generally from one basin, and the production averages 18 oz. per day. From the superior quality of their cocoons (which must doubtless arise from the great purity of the air, as their recoits are very ill managed), 10 or 11 lbs. will ordinarily give 1 lb. of silk; they reel principally from three to six cocoon silks. The raw article can only be exported from Nice. Piedmont silk must be thrown before exportation. This prohibition is unpalatable to the Piedmontese, as they seem to suppose that the demand and consequent production is thereby decreased. All the principal reelers have throwing mills, which, as the machinery and skill employed in the various operations were very imperfect, would easily admit of improvements; but the government will not allow what it may suppose has even a remote tendency to decrease the demand for manual labour. Piedmontese silk is very unevenly reeled, but this disqualification is compensated by its extraordinary strength.

In the Milanese, sorted cocoons cost on an average 1s. 4d. per lb. English in the marshy districts, where the thicker silks are reeled; and 1s. 9d. in the higher parts. In the latter they generally wind $\frac{1}{3}$ cocoons, say $\frac{1}{2}$ of the weight produced,

or 12,235 basins, each 24 oz. per day, for 15 weeks							lbs. 1,651,000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
2-5ths	}	8,160							...	24 oz.

In the filatures of fine silk there are from 10 to 250 basins each; all reel four skeins at once from each basin. In reeling 4-5 cocoon silk they generally use 12 lbs. of cocoons for 1 lb. of silk. Steam is employed in most part of them to heat the water. In the coarse filatures the number of basins seldom exceeds 20; they reel four skeins from each basin up to 8 or 10 cocoons, but only two skeins generally for thicker silks. There are four great fairs in Lombardy for the sale of this, which is their staple article, where prices are regulated, and the small reelers sell their parcels of silk.

An actual survey, assisted by the valuable statements of Signior Dominique Staurengo, an eminent reeler and vendor of silk at Milan, form the ground of this statement respecting Milanese silk.

In Tuscany the average cost of cocoons is 1s. per lb. English. The whole production of silk, which is estimated at about 100,000 lbs., is of inferior quality. This is the only country in Italy from whence cocoons are permitted to be exported.

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Mr. W. Felkin to
the Right Hon.
C. Grant;
24th April 1832.

Cocoons cost in the neighbourhood of Fossombrone much higher than near Bologna and Rome: it is probable, however, that the average price is not above 1*s.* the lb. English; 14lbs. cocoons are used to make 1 lb. of 3-4 cocoon silk, and 12lbs. are used to reel into the thicker kinds, chiefly of 5-6 to 10-12 cocoons. The quantity produced in these States is not exactly known. Wages to reelers, &c. are low, as in Tuscany, where 12 to 14lbs. of cocoons are reeled in 1 lb. of very inferior silk; and improvement is apparently improbable in either district.

In Naples cocoons are sold at about 1*s.* the lb. English, and about 14lbs. are used to 1 lb. of silk. It is of fair quality, and mostly of $\frac{3}{4}$ cocoons. About half the annual production is reeled in the royal filatures. The Neapolitans have two recoils each year.

It is probable that the price of cocoons in Calabria is about 10*d.* the lb. English, but how many are used to each lb. of silk I do not know exactly, most likely 15 or 16lbs.; and after all the silk is very rough, and in other respects inferior. Cocoons may be imported into Sicily from Calabria. I have no data on which to state anything as to the Sicilian product of silk.

In Spain cocoons cost about 1*s.* 2*d.* per English lb. and are reeled in the district of Valencia into $\frac{3}{4}$ cocoon silk of excellent quality, where it is affirmed that they procure 1 lb. of silk from 9lbs. of cocoons. This silk is worth 18*s.* a lb. In some other districts they reel as high as 24 cocoon silk, some of which is not worth more than 11*s.* the lb. They reel 3lbs. of the worst, and 12oz. of the best a-day. The wages seem to vary as follows

Men and women at the basins, from	...	1 <i>s.</i> to 3 <i>s.</i> 4 <i>d.</i> a-day.
...	at the reels, from	...
		8 <i>d.</i> to 2 <i>s.</i> 9 <i>d.</i> ditto.

And the cost of charcoal 8*d.* a-day each basin.

Cocoons may be exported from Spain. The worms are fed on the leaves of black mulberry trees. Two recoils a-year are obtained in Spain pretty generally.

OBSERVATIONS on the Product of a Recoil superintended by the Writer, at Alais, Department des Cevennes, France, in 1825.

At the end of thirty-nine days from the time of hatching the worms the cocoons were in process of formation, and the active part of this recoil was finished. The trees being pruned as the leaves were gathered, or within a day or two, they only needed a "labour" with the spade. The branches on which the worms had spun were laid by in bundles, after they had been cleaned from the outside filament of the cocoons, ready for the next recoil. The stages were taken down, the rooms cleared out (yielding an amazing quantity of the excrement of the worm), as it is dangerous to disturb the worm by cleansing the stages just when going up to spin, and the first fine day the cocoons were sent to the owner: he having a filature, reeled them himself. Throughout the Cevennes, the peasants' cocoons are sold to one or other of the great filatures in the larger towns of the district. They either bargain for the recoil as it is going on, at the time's price, to be afterwards settled; or when the cocoons are spun, they bring with them one of the small branches garnished with cocoons, and the silk-winder buys from that sample. Thus, on the 22d June the town of Alais was crowded with those who brought their cocoons to be weighed and paid for in hard cash by those to whom they had been previously engaged; or who brought their small sample branch to find a purchaser. The silk which is brought in this manner in the cocoon to Alais or its neighbourhood, on its distribution from their filatures, either in the raw or thrown state, to Lyons, St. Etienne, &c., according to the lowest estimation amounts to ten millions of francs annually, and probably a much larger sum would be nearer the truth: the proportion of this amount paid for the labour of reeling and throwing would not be one-half, leaving at least the

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the other for cocoons. The cocoons are always sold unskilled to the reelers. On weighing the product of our recolt, we found it to be as follows, when contrasted with the expenditure; or rather what would have been the expenditure, had the labour, &c., been paid for regularly, and the leaves bought at the usual average price.

The 11 oz. of eggs, when hatched, produced, at the usual calculation of 33,000 eggs to an ounce, 363,000 worms; these ate, according to the manager's weight, up to May 30th inclusive

...	...	...	...	...	...	10,600 lbs.
On May 31	...	...	...	...	...	1,000
June 1	...	...	...	...	...	1,500
— 2	...	...	...	...	...	2,500
— 3	...	...	...	...	...	2,500
— 4	...	...	...	...	...	2,500
— 5	...	...	...	...	...	2,000
— 6	...	...	...	...	...	500

During the whole recolt ... Amount 23,100 lbs.

There were supposed to be 1,000 trees plucked, therefore the average weight from each tree was 23lbs.; these trees were mostly small, and about 15 years old on the average: say 2,100lbs. weight of leaves for each ounce hatched. There were 1,050lbs. weight of cocoons produced in the whole; thus 22lbs. of leaves were consumed to produce 1lb. of cocoons.* Now this was rather a larger weight than the average of the better chambers, being about 95lbs. of cocoons per ounce of eggs hatched; yet the profit was no great one; for at the low price of a sous a lb., the lb. of cocoons would cost in leaves alone 22 sous; and the average price for good cocoons was but 28 sous the lb. These 1,050lbs. of cocoons were reeled into seven-cocoon silk, and produced 1½ oz. per lb. of cocoons, or 87½ lbs. of 16 oz., worth on an average 25 francs per lb.

The account of profits, both to the breeder and the reeler, may be thus stated, on an average year's prices; this year being high for the leaves and low for the cocoons.

Cost of 11oz. of eggs, i.e. 11lbs. of cocoons	15-0	
Rent of chamber fitted up, and the cost of coal for four fires, on an average, for six weeks	...	120-0
Expenses in labour or sustenance, and the pay of the people, for the recolt	...	100-0
23,100lbs. of leaves, or 231 quintals, at 5 francs	...	1,155-0
		1,390-0
Profit to breeder (nearly 124)	...	185-0
		1,575-0
Reeling 1lb. per day, at 30 sous the Fileuse	}	218.75
at 20 do. the Tourneuse		
		1,793.75
		Profit

* The ordinary rough calculation is, that an ounce of eggs will require 20 quintals of leaves, and will produce one quintal of cocoons, or 10lbs. of silk of 30 ounces to the lb.

† The refuse or waste silk, which is gathered from the branches, and is sold to be spun, is a part of the profit which I have not taken into the account; it is calculated to be sufficient to pay the expense of gathering and preparing the branches. In like manner, the refuse in reeling is considerable, and is calculated by some to pay for the labour of both "fileuse" and "tourneuse;" but I am unable to state it exactly. This refuse is all carded and spun.

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24th April 1832

Brought forward 1,793·75		
Profit to filature on the price of the cocoons, of exactly 25; but has to pay risk and expense of cocoons, killing, sorting, attendance, and risk on the sale of the silk, which may be taken at about one-half, or 12½ per cent. and leave 12½ clear profit	393·75	* Produced 87½ lbs. of silk, worth 25 francs the lb. (of 16 oz.)
	2,187 50	Raw 2,187·50

I have submitted these calculations of profits, &c. to a very intelligent native, who, though not engaged in the recolt, has a very accurate knowledge of it in this district, from twenty years' observation; and it is his decided opinion, that the average profit to the breeder who buys his leaves is about 12½ per cent., which is to pay him for his risk and labour in the recolt; and that 12½ per cent. may remain to the reeler, after covering his expenses and risk, to stand for his clear profit. This calculation will not be quite exact for the filatures in the low countries, nor yet for their recolts. The price of cocoons is lower in the plains than in the mountainous districts, and the price of labour is also less: there is also a considerable difference in the price, as there is in the quality of the respective silks. The price of labour applied to this production (where it is paid for, as in the large recolts of cocoons, the reeling of them, and throwing the silk), is universally high where good silk is produced, and there is not one exception to the case in the Cevennes. 16 oz. of good silk is an excellent day's work for one girl who turns the reel and one woman who keeps up the ends of the cocoons; the former receives 20 sous, the latter 30 sous a day. The children and others in the filatures are paid proportionably high wages.

I found 230 cocoons weighed a lb. on an average. There were 363,000 worms it is calculated when hatched, 241,500 only produced cocoons; the loss was therefore 121,500, or one-third of the whole.

Another recolt, superintended by a gentleman of great skill, was thought to have made a very unusual return. He hatched 1½ oz. and gathered 160 lbs. of cocoons: I believe there is seldom greater success known throughout the silk districts. At 230 to the lb. he had 36,800; he had hatched we suppose 49,500; the loss of 12,700 was one-fourth. The cocoons in this recolt were also superior, and sold for a sous or two a lb. more than ordinary.

A peasant who was obliged to trust to his wife and family to manage by day, and could only assist by night, bred 6 oz. in his cottage. Our former rate of calculation gives 198,000 as hatched. They produced only 355 lbs. of cocoons, which he thought a fair recolt: at 230 to the lb., 81,650 succeeded, and 116,350 were lost, or nearly three-fifths; but it is very probable that his cocoons were smaller, as is usual when there is deficient attention to the worms, so that he possibly lost only half the number hatched.

M^r Bonafous calculates that Count Dandolo lost one-fourth of the worms hatched in his improved recolts. As this Italian nobleman was not only extensively conversant with the arts and sciences, but had applied his knowledge with distinguished success, amongst other things of general utility, to the production of silk, I shall briefly state some of those details which will place the Alais recolt in juxtaposition with the results of his breeding worms. His recolts are spoken highly of by those who visited them while he managed them, but they have been abandoned since his death. Dandolo's error seems to have been his sacrificing popular usefulness to mere systematizing the minutiae of the recolts: the half of his arrangements and suggestions in this instance were impracticable or useless.

In

* See Note † in the preceding page.

In the Alais recolt 318 square ft. were allowed for each ounce of worms when at their full size; Dandolo states that he finds 239 square feet sufficient. We gave three meals a day; he recommends four. Our worms ate, during the whole time of the recolt, 2,100 lbs. of leaves for each oz. of eggs hatched; his spun after they had eaten only 1,840 lbs. Our worms lived 39 days before they were enveloped in their cocoons: his recolt was finished in 33 days. The heat of our rooms varied from 24 to 15 Rr. (86 to 66 Fahrenheit), while he speaks of 19 to 16 Rr. (75 to 68 Fah.) only. We lost one-third of our worms; he calculates he lost only a fourth. Of ours, 21,955 in each ounce of eggs hatched produced cocoons, according to our supposition of the number of eggs in each ounce; of his, 24,750. We had 95½ lbs. of cocoons per oz.; he had 107½ lbs. We expended 22 lbs. of leaves to each lb. of cocoons; he only needed 17 lbs.

The following particulars of an experimental filature at Tiverton, in the winter of 1825 and spring and summer of 1826, of about 35,000 lbs. weight of Florentine cocoons, growth of the year 1825, may be found interesting, and perhaps useful as a guide in any future efforts.

A small part of the cocoons were pressed into casks, to save expense in freight, but neither reeled well nor produced even silk. The remainder were put into chestnut-tree cases, without pressure; and as the freight was 1s. 10d. a foot, it raised the cost of the cocoons very materially. If this charge could not be considerably reduced, it would be a great drawback upon profit in an English filature to be supplied with cocoons of foreign growth. Some were eaten by mice before the liability to such depredation was perceived, and others were pierced by a black insect which had found its way into the cases in Italy, and which sought to feed upon the chrysalis inside. The time of arrival in this country was so far in the decline of the year, that the atmosphere was always humid in the mornings and evenings, and the vapour from the basins was very great and troublesome; it was often with difficulty we could get the silk on the reel dry, and the atmosphere was very unhealthy. Of this we had proof in the tendency to rheumatism that prevailed amongst the children employed; two had serious attacks, and a third died of that disease. And the constant dipping of the hands in hot water soddened the fingers so much, that of the twelve girls most regularly at work, eleven had frequent and large formations of matter in the fingers; one had formations of matter in the arms, and another in the head. I trust every precaution that private attention or medical skill could suggest was taken to prevent disease or suffering amongst the children. My own health and that of my assistant was for the time considerably affected. Of course means might, in any future trial, be made use of to heat reeling apartments as to obviate some of the difficulties we encountered.

The results were, that 28,000 lbs.* weight of cocoons were reeled into 1,850 lbs. weight of principally 15-cocoons silk, or 15 lbs. of cocoons to 1 lb. of silk; and the cost in wages to reelers, reel-turners, and overlookers, was 2s. a lb., and the waste paid for the fire. Six of the reelers, when well taught and regularly at work, produced, on an average of six months, 20 oz. of silk a-day of ten hours clear work. The silk was not of a bright or good colour; and at the latter end of the time, in the summer of 1826, owing to the hardness of the cocoons requiring too much softening, a good deal of that part of the produce was foul; however the great bulk was even and answered the purpose of the bobbin-net lace manufacture very well: of course it was reeled on Mr. Heathcoat's patent plan of separate original threads, but with an ultimate junction and heavy croisée to form one thread (say three or five cocoons each) of 15-cocoon silk, &c.; and by an arrangement of fileuses and guide plates circularly round a basin, I easily reeled a sample of 95-100 cocoons of perfect regularity, consistence, and roundness of thread, with

* Of the remaining 7,000 lbs. part was employed in the commencement without taking a strict account, because of their being used by the girls who were learning; and the rest at the end, consisting of double ones, of which every recolt furnishes a greater or less number, according to management.

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with the gum well driven out by a crossing of the thread on itself. By the same process a thread of any given number of cocoons may be safely and regularly reeled.

This attempt must be considered as on the whole unfavourable to the idea that a filature of foreign cocoons in this country can be worked to profit, as compared with those abroad: upon the grounds that the freight of cocoons is too heavy; the season of the year is necessarily adverse and too advanced; the wages are too high; and the health of the females employed might probably in the majority of cases be materially injured.

In the course of superintending silk reeling, and many visits to French and Italian filatures, the following remarks have appeared to me worth preservation:

Filature reeling is always preferable to cottage reeling; the peasants should therefore be encouraged to produce cocoons, and reeling should be considered a distinct business.

If cocoons are too highly dried before reeling, as is often the case when the chrysalis is killed by the heat of the sun or an oven, the silk is apt to come off foul. The steam baths therefore are preferable for this purpose, as is found by those French reelers who have used them.

Cocoons should be well picked as soon as they are cleared from the rods, and the "fondues," or other discoloured ones reeled at once, without killing. Encouragement should be given to breeding worms in hilly districts, especially for white recolts. The worm which produces the white cocoon is more delicate than other varieties, and pure air is essential to excellence of colour in its product. Also in reeling white silk more care and skill are requisite than for yellow, the threads being finer and more apt to come off in layers, and to be gouty.

It is of great importance that the superintendents be competent judges of silk, and masters of the hands. It is in exact proportion to the degree in which these two qualifications are found united in the management of any filature on the Continent, that the character of its silk is established as good or otherwise. I never saw an exception.

Quality, and not quantity, from each reel per day, should be most sought after. And if each reel's produce be every evening hung apart or ticketed, and on a weekly inspection a small bonus be given to such reelers as have merited it, a stimulus is given to the exertion of care and skill which I have seen profitably employed, resulting, as it has done, in an article that cost less and was worth more than silk reeled from cocoons of equal quality but where no such plan was in operation. A high croisée is invaluable. The thread should be tied, not thrown on the reel, as is often done. The ends of the cocoons should be found by "batteuses" regularly employed in that part of the business only.

The complete union of the filaments from the cocoons in the first thread, and in Mr. Heathcoat's plan the complete union of the threads separately formed from given numbers of the filaments, is in my opinion of the first importance; the silk is not fibrous, and every subsequent operation previous to boiling is attended with less difficulty and waste, where this preliminary has been well attended to.

The skeins should never be cleaned from burrs, either on the reel or afterwards, until they come into the hands of the throwster.

APPENDIX, No. 10.

APPENDIX,
No. 10.

Return of
Purchases and
Sales of Sugar
for Five Years

A RETURN of the PURCHASES and SALES of SUGAR of every kind by the EAST-INDIA COMPANY, stating the Place where Purchased, the Average Prices of each Sort or Quality, and the Quantities of each; stating the Amount of the Advances made at each Place, and the Balances remaining due from the Natives, in each of the Five Years past.

PROVISION OF THE INVESTMENT OF SUGAR AT THE FACTORY.

YEARS of Provision.	PLACE where provided.	Quantities provided in each Year.	Advances made and Balances remaining due.			
			Balances in hands of the Natives at the commencement of each Year.	Advanced in the course of each Year.	TOTAL.	Balances in the hands of the Natives at the close of each Year.
		Cwt.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.
1825-26 ..	Benares..	82,769	99,693	9,54,555	10,54,248	2,94,588
1826-27 ..	Ditto ..	82,226	2,94,589	6,42,176	9,36,765	1,85,460
1827-28 ..	Ditto ..	79,774	1,85,400	15,19,413	17,04,813	9,06,534
1828-29 ..	Ditto ..	126,946	9,06,534	15,59,076	24,65,610	10,90,326
1829-30 ..	Ditto ..	120,080	10,90,325	4,49,418	15,39,743	2,86,878
		491,792	25,76,541	51,24,638*	77,01,179	27,63,726

(continued.)

Cost of the Sugar provided.	Average Price at which provided per Cwt.	Commission, Charges of the Factory Establishment, Packing Charges, Coolie Hire, and Expenses of Transportation to the Presidency.	TOTAL Cost of the Sugar, per Factory Invoices.	YEARS of Provision.
Sa. Rs.	Sa. Rs. dec.	Sa. Rs.	Sa. Rs.	
7,59,660	9 178	1,03,787	8,63,447	.. .. 1825-26
7,51,365	9 138	1,06,904	8,58,269	.. .. 1826-27
7,98,279	10 007	1,13,364	9,11,643	.. .. 1827-28
13,75,284	10 833	1,82,670	15,57,954	.. .. 1828-29
12,52,865	10 433	1,71,612	14,24,477	.. .. 1829-30
49,37,453		6,76,337	56,15,790	

(continued.)

DISPOSAL OF

Arrived at the Presidency and consigned from thence, in the following Years.	Received at the Presidency, being the Quantity provided, deducting Damages and Deficiencies.	Value, as stated upon the Export Warehouse Books, of the Quantities received at the Export Warehouse			Consigned to St. Helena for the use of the Garrison, &c. charged to Territorial Department at its Invoice Cost		Invoice Amount Consignments to England	
		Factory Invoice cost.	Duties, Proportion of Salaries of the Board of Trade and Export Warehouse Establishment, Losses by Wreck of Boats, &c. Cooley Hne, Packing, and sundry Charges Merchandise at the Presidency.	Total Invoice Cost of Sugar dispatched from the Presidency				
	Cwt	Sa Rs.	Sa. Rs.	Sa Rs.	Cwt	Sa Rs.	Cwt	Sa. Rs.
1825-26	52,988	5,51,715	41,188	5,92,903	2,001	23,393	50,987	5,69,509
1826-27	107,720	11,11,818	1,01,324	12,13,142	2,496	28,489	105,224	11,84,653
1827-28	80,286	9,06,050	50,872	9,56,922	2,500	30,517	77,786	9,26,406
1828-29	125,741	15,29,049	79,566	16,08,615	3,000	37,278	122,741	15,71,337
1829-30	122,243	14,42,647	1,07,792	15,50,439	3,000	37,094	119,243	15,13,345
<i>Add—To account for the quantity dispatched from the Factory.</i>	488,978	55,41,279	3,80,742	59,22,021	12,997	1,56,771	475,981	57,65,250
<p><i>Loss by wreck of boats, &c. in transit to the Presidency, and short deliveries: deducting increase of weight previously to shipment; which losses form part of the charges put upon homeward invoices..</i></p> <p><i>Damaged sugar sold at the Presidency, the profit and loss upon which enters into the calculation of charges to be put upon invoices. ..</i></p> <p><i>Short charged upon homeward invoices..</i></p>								
	760	53,694						
	2,054	20,223						
	—	594						
	2,814	74,511						
	491,792	56,15,790						

Mem.—The Books of Account for the Year 1829-30 are those last received from India.

THE SUGAR.

Quantities and Sale Produce in England of the Consignments, including Charges against Owners of Ships for Damages and Short Deliveries.										
Losses by Wreck of Shipping.	Waste on Voyage beyond Quantity charged Owners, also Waste in Warehouse and Drafts and Allowances to Buyers.	Total Losses and Allowances.	Sale Produce, including Sums charged Owners.	FREIGHT AND CHARGES.					NET SALE PRODUCE.	
				Freight and Demorage.	Landing and all other Charges in London, calculated at 5 per cent. on the Sale Amount.	Salvage and General Average.	TOTAL.			
	Cwt.	Cwt.	Cwt.	£.	£.	£.	£.	£.	£.	
1,500	1,641	3,141	47,846	79,524	20,296	3,976	—	24,272	55,252	
Sub Rs. 10,624	—	—	—	—	—	—	—	—	—	
—	4,265	4,265	100,969	178,437	31,795	8,934	849	41,578	136,859	
—	1,739	1,739	76,047	122,171	23,708	6,108	—	29,816	92,355	
—	2,676	2,676	120,065	160,332	31,177	8,016	—	39,193	121,139	
—	1,592	1,592	117,651	164,432	33,027	8,222	—	41,249	123,183	
1,500	11,913	13,413	462,568	704,896	140,003	35,256	849	176,108	528,788	

(Errors excepted)

East-India House,
20th March 1832.

THOS. G. LLOYD,

Acct. Gen.

APPENDIX,
No. 11.

Value of Principal
Exports to Places
East of Cape
except China, in
1811, 1815, and
1828.

APPENDIX, No. 11.

STATEMENT showing the VALUE of certain of the Principal Articles Exported from Great Britain to Places East of the Cape, except China, in 1811, 1815, and 1828, excluding Mauritius in the last Year.

	Year ending 5th Jan. 1812.	Year ending 5th January 1816.	Year ending 5th January 1820.	Increase since 1812.	Decrease since 1812.
	£.	Quantities. Cwts. No. Cwts.	Quantities. Cwts. No. Cwts.	£.	£.
Brazils	12,661	1,098	316	2,970	9,691
Cabinet and upholstery wares ..	12,573	—	—	3,787	8,786
Carriages	4,656	No. 164	No. 152	11,277	—
Copper, unwrought	—	Cwts. 10,287	Cwts. 15,147	70,287	—
Copper, wrought	240,636	—	26,343	136,188	34,161
Cordage	32,744	—	5,161	12,254	20,490
(including earthenware.)					
Glass	118,172	—	—	109,525	8,647
Guns and pistols	118,898	No. 53,802	No. 42,796	96,589	22,309
Hats	22,523	Doz. 4,637	Doz. 1,986	8,660	13,863
Iron, bar and bolt	90,021	Tons 9,150	Tons 17,378	147,790	57,769
Ditto, cast and wrought ..	177,002	—	82,429	88,153	88,849
Lead	70,310	—	1,764	31,192	39,118
Leather, tanned and wrought (including saddlery)	45,028	—	—	43,412	1,616
Linen	25,438	—	—	30,031	—
Steel, unwrought	2,896	Cwts. 10,601	Cwts. 4,469	5,432	—
Tin, ditto	—	—	106	219	—
Tin and pewter wares and tin plates	10,226	—	—	6,498	3,728
Woollen manufactures	277,196	—	—	261,326	15,870
Total Woollens, Metals and other principal articles, exclusive of Cotton Goods }	1,260,980	—	—	1,065,590	Net. 195,390

II.—FINANCE.—COMMERCIAL.

848 II. FINANCE.
Commercial.

APPENDIX, No. 11.

continued.
Value of Principal
Exports to Places
East of Cape,
except China, in
1811, 1815, and
1828.

WM. LEACH.

All other goods, except Cotton	727,136	—	1,145,810	—	1,188,106	460,970	—
Total Exports, except Cotton	1,988,116	—	2,423,350	—	2,253,696	Net. 265,580	—
Cotton manufactures	107,306	—	142,411	—	1,505,714	1,398,408	—
Cotton twist and yarn	—	—	—	—	388,888	388,888	—
Total of all Exports .. £	2,095,422	—	2,565,761	—	4,148,298	Net 2,052,876	—

The Exports of 1828, compared with those of 1815, both being Years of Open Trade, exhibit the following results.

	1815.	1828.	Increase.	Decrease.
Total Woollens, Metal and other principal articles, exclusive of Cotton Goods ..	1,277,540	1,065,590	—	211,950
Total Exports, except Cotton	2,423,350	2,253,696	—	169,654
Total of all Exports, &c.	2,565,761	4,148,298	1,582,537	—

The books of the Custom-house do not furnish the quantities in 1811, nor is Mauritius separated before 1823.

(Errors Excepted.)

India Board, Westminster,
21st March 1872.

APPENDIX,

STATEMENT of BULLION Imported into

	1814-15.	1815-16.	1816-17.	1817-18	1818-19.	1819-20.
	Sa Rs.	Sa Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa Rs.
Acapulco	—	—	—	—	—	—
Amboyna	1,59,139	—	11,250	6,326	900	—
Annulaboo	—	—	43,575	56,873	—	—
Amsterdam	—	—	94,275	—	50,625	—
America, North	—	—	—	99,000	12,69,598	54,54,575
America, South	—	—	—	—	—	—
Antwerp	—	—	—	—	—	—
Africa Coast	—	—	—	—	—	—
Bombay	12,15,543	4,38,410	61,125	1,39,458	75,569	3,66,977
Bussorah	4,24,478	5,88,760	23,93,079	14,17,372	32,59,667	22,02,738
Bahia	2,35,000	—	—	—	—	—
Batavia	2,04,179	69,225	8,23,986	9,48,308	8,52,397	22,32,801
Boston	—	7,44,928	16,26,895	23,59,842	37,32,293	11,79,085
Brazil	—	4,86,343	18,23,581	2,84,100	—	—
Beverly	—	—	1,56,172	—	—	—
Bencoolen	20,000	43,770	1,59,413	44,225	15,019	—
Buenos Ayres	—	—	18,000	—	3,899	1,06,675
Bordeaux	—	—	—	6,83,759	14,01,067	7,71,607
Bushire	—	—	—	—	1,43,857	75,453
Baltimore	—	—	—	—	6,919	—
Bourbon	—	—	—	—	67,950	94,500
Bourang	—	—	—	—	9,000	—
Bristol	—	—	—	—	—	1,47,855
Cape of Good Hope	2,700	39,12,800	28,774	4,05,239	4,08,015	63,662
China	49,02,613	—	65,18,231	65,51,617	78,45,918	31,80,847
Coringa	19,710	54,000	4,950	—	—	—
Coast of Sumatra	—	6,75,000	—	—	—	—
Cadiz	—	45,000	—	—	9,000	—
Ceylon	—	—	—	—	—	4,275
Chittagong	—	—	1,41,293	—	—	—
Cochin	—	—	8,000	—	—	—
Copenhagen	—	—	2,10,375	1,22,625	1,85,625	1,11,105
Cananore	—	—	—	1,200	—	—
Chile	—	—	—	—	1,37,250	1,062
Canton	—	—	—	—	—	—
Cuttack	—	—	—	—	—	—
Calicut	—	—	—	—	—	—
Coast of Coromandel	—	—	—	—	—	—
Eastward	—	52,546	—	49,370	28,610	—
Eastern India	—	—	—	—	—	—
Feetcherry	—	—	34,875	7,875	—	—
France	—	—	2,13,082	96,249	—	—
False Point	—	—	—	—	—	—
Foreign Europe	—	—	—	—	—	—
Greenock	—	—	37,125	24,750	36,000	1,63,800
Gulf of Persia	—	6,750	—	—	—	—
Gloucester, in America	—	1,60,249	—	—	—	—

8.15

Calcutta by Sea, valued in Sicca Rupees.

[illegible]

(continued)

STATEMENT of BULLION Imported

	1814-15.	1815-16.	1816-17.	1817-18.	1818-19.	1819-20.
	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.
Gibraltar	—	—	—	2,32,508	8,42,909	20,61,906
Guaco	—	—	—	—	—	—
Havre de Grace	—	—	3,14,325	93,834	92,475	5,20,135
Hamburgh	—	—	2,22,750	—	—	—
Hull	—	—	—	—	1,67,260	41,539
Holland	—	—	—	—	—	—
Halifax	—	—	—	—	—	—
Isle of France	1,66,618	1,35,928	3,69,747	3,11,838	16,875	8,000
Juddah	2,15,956	67,500	7,59,952	2,15,204	10,90,741	11,34,452
Janaria	—	—	—	* 3,32,000	—	—
Jahungeer	—	—	—	—	751	—
Java	—	—	—	—	5,184	—
Kernaul	—	—	5,675	—	—	—
Kuasco	—	—	—	—	—	—
London	4,02,650	10,16,029	23,08,078	53,75,680	92,76,521	44,99,190
Lisbon	7,11,069	34,85,072	63,39,450	17,05,456	26,41,789	14,54,318
Leghorn	—	—	1,51,137	—	2,35,800	73,217
Liverpool	—	33,750	—	54,537	16,29,505	3,82,322
Lima	—	—	—	—	9,92,182	10,07,750
Madras	42,750	9,19,031	2,93,539	38,374	37,334	2,93,558
Malta	—	—	—	—	4,50,000	—
Muscat	3,75,437	8,23,245	4,71,248	9,19,038	2,07,030	6,21,156
Mocha	1,77,244	1,13,367	4,09,675	—	21,676	1,15,261
Manilla	—	4,93,471	15,80,821	21,72,994	1,67,731	9,31,729
Marble Head	—	1,42,875	68,400	94,777	2,138	—
Madura	—	1,49,175	—	—	9,000	—
Masulipatam	—	750	—	—	—	—
Mosambique	16,499	—	—	—	—	9,300
Marcellas	—	—	—	2,20,500	25,958	99,000
Molucca	—	—	—	1,20,655	3,13,389	2,43,368
Mauritius	—	—	—	22,500	1,79,775	45,000
Madagascar	—	—	—	—	58,500	—
Malabar Coast	—	—	—	—	10,125	—
Macao	—	—	—	—	—	17,18,251
Malay Coast	—	—	—	—	—	—
New York	—	—	3,39,779	7,50,715	27,04,212	2,14,425
Nagapatam	1,350	11,16,000	607	3,085	365	3,150
Nagore	1,800	—	34,315	15,163	1,460	20,103
New South Wales	—	2,240	13,500	—	—	—
Nagore	—	—	—	—	—	—
Newberry Port	—	—	—	1,23,750	—	—
Nantes	—	2,74,867	—	—	1,73,700	—
Ostend	—	—	38,250	—	—	—
Ockotsk	—	—	—	—	37,575	—
Penang	6,76,904	2,34,096	2,82,125	12,25,050	17,32,875	9,17,825
Padang	—	87,526	9,499	48,370	1,81,654	3,72,805
Portsmouth	—	—	2,35,259	5,13,000	5,28,173	94,500
Philadelphia	—	15,30,000	7,16,454	10,70,755	2,48,175	4,49,750
Pernambuco	76,057	3,19,828	5,90,797	—	7,33,075	—
Pulopelong	—	—	21,179	—	—	—
Pondicherry	—	—	13,500	—	—	—

II.—FINANCE—COMMERCIAL.

847

into Calcutta by Sea, valued in Sicca Rupees—continued.

1820-21.	1821-22.	1822-23.	1823-24.	1824-25.	1825-26.	1826-27.
Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.
3,83,762	—	—	—	—	1,30,500	—
9,000	—	96,186	34,590	—	—	—
—	—	—	—	—	—	—
1,44,000	87,266	—	—	—	—	4,361
—	—	—	—	—	64,575	—
11,85,241	7,06,201	2,51,550	1,29,325	35,859	1,82,132	18,625
—	—	—	—	—	—	—
—	—	—	—	—	—	—
68,000	—	—	—	—	—	—
13,64,485	13,25,266	2,23,950	11,68,413	—	—	—
30,40,445	13,43,229	17,59,106	—	1,12,500	—	—
—	39,165	—	—	—	—	—
37,139	95,623	6,223	—	—	—	2,000
1,60,513	13,500	27,000	1,04,918	—	—	—
1,75,049	—	—	71,775	—	—	—
3,25,046	2,56,500	1,90,687	63,675	—	—	—
33,750	1,81,163	8,93,982	—	—	—	—
22,07,837	1,52,566	4,60,254	6,89,875	1,74,881	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
2,14,538	—	—	—	—	—	—
66,736	85,561	—	11,700	—	—	—
1,15,496	61,479	56,300	4,321	—	—	—
—	—	—	—	—	—	—
13,83,629	14,37,938	14,58,069	8,12,670	3,60,312	3,87,030	3,06,678
—	34,150	—	—	—	—	—
1,63,305	—	72,000	—	—	—	—
1,680	—	—	—	—	—	—
—	—	11,387	13,500	—	—	84,365
12,652	—	—	—	—	—	—
—	56,250	—	—	—	—	—
—	—	—	—	—	—	—
5,84,301	12,09,888	4,36,085	4,10,320	1,672	—	—
2,73,984	74,739	2,15,377	85,110	—	—	—
3,34,838	3,93,750	8,61,016	1,88,750	—	—	—
3,54,944	—	—	—	—	—	—
—	—	—	—	—	—	—

II. 5 R

(continued)

STATEMENT of BULLION Imported into

	1814-15.	1815-16.	1816-17.	1817-18.	1818-19.	1819-20.
	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.	Sa. Rs.
Pigue	46,000	15,155	20,000	1,73,000	—	—
Port Jackson	7,875	20,000	—	—	—	—
Providence	—	1,68,300	—	2,37,667	—	—
Point de Galle	—	—	—	17,730	—	—
Port Louis	—	—	—	63,972	1,14,601	59,400
Prince of Wales Island	—	—	—	—	4,500	43,283
Persian Gulf	—	—	5,78,847	—	49,215	39,029
Pedier	—	—	—	—	—	—
Philia	—	—	—	—	—	—
Philippine Islands	—	—	—	—	—	—
Ramoo	—	64,000	—	—	—	—
Rangoon	1,33,297	89,590	3,62,365	41,000	—	70,299
Rotterdam	—	—	51,664	—	—	—
Rio de Janeiro	4,19,838	3,40,357	5,12,602	16,30,169	14,32,925	12,74,284
Rochelle	—	—	—	—	22,500	—
Red Sea	—	—	—	—	—	4,500
Rio	—	—	—	—	—	—
Salem	—	9,51,867	8,42,289	6,56,250	3,73,050	4,20,935
St. Malo	—	—	53,370	—	—	69,562
Surahyya	—	7,830	—	—	—	—
Sumatra	—	—	—	2,08,472	4,27,076	—
Siam	—	—	—	1,950	6,375	—
Serampore	—	—	—	—	3,240	—
Samarang	—	—	—	—	2,01,899	2,69,521
St. Maloes	—	—	—	—	67,500	—
Sincapore	—	—	—	—	—	1,575
Singapore	—	—	—	—	—	—
St. America	—	—	—	—	—	—
St. Blas	—	—	—	—	—	—
Tellicherry	—	—	—	—	—	9,000
Tapanooly	—	—	—	—	—	—
Vizagapatam	—	—	6,696	—	—	—
Valpario	—	—	—	1,44,225	9,000	41,000
Valacca	—	—	—	—	—	—
United Kingdom	—	—	—	—	—	—
West Coast of Sumatra	1,85,643	—	—	—	31,549	—
Zenzebar	—	—	—	—	—	—
TOTAL Sicca Rupees	1,08,40,349	1,98,79,630	3,24,50,950	3,21,35,465	4,70,98,520	3,55,91,215

U. FINANCE - COMMERCIAL

respectively, in each Year, from 1910-11 to the latest Period; distinguishing Europe and Shipments from Port to Port.

Ceylon.		Gos, Bamsam, and Dia, and the Concan, Bamsam, and sundry Ports		Cutch and Sindh		New Holland, N and the Malay
Import.	Export.	Import.	Export.	Import.	Export.	Import.
Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.
—	—	—	—	—	—	—
—	12,200	3,07,714	13,86,355	827	1,000	—
—	—	—	—	—	—	—
—	5,000	3,82,000	18,87,868	—	—	—
45,600	—	—	—	—	—	44,240
1,234	1,051	1,37,188	—	—	—	—
6,000	3,000	2,95,374	37,58,843	6,05,185	4,530	—
—	9,500	—	—	—	—	2,650
3,170	17,355	3,01,288	5,875	—	—	1,592
—	40,097	2,30,502	14,01,849	2,61,147	17,095	—
—	—	—	—	—	—	—
37,130	1,345	1,57,627	—	—	—	—
—	81,729	6,25,892	9,55,454	1,40,248	—	—
45,000	—	—	—	—	—	2,000
9,066	—	1,33,939	9,87,295	2,253	5,380	—
5,625	—	5,02,390	—	—	—	22,200
738	5,960	1,04,088	—	—	—	2,172
—	—	4,50,081	9,43,441	48,195	11,008	—
7,875	—	—	—	—	—	20,121
13,051	700	2,00,030	2,100	—	—	1,000
—	1,16,000	6,02,932	10,27,822	—	72,000	—
—	788	—	—	—	—	1,37,050
5,326	35,000	2,05,222	—	—	—	—
—	—	47,832	1,00,000	—	—	—
18,000	—	—	—	—	—	11,000
4,109	1,38,272	2,12,207	1,000	—	—	—
—	—	50,000	25,721	—	25,000	—
—	—	—	—	—	—	5,000
33,329	2,000	2,60,100	—	—	—	—
—	—	25,440	22,755	2,200	12,000	—
—	—	—	—	—	—	—
500	56,228	2,07,000	—	—	—	—
—	—	11,000	1,47,000	2,100	2,000	—
—	—	—	—	—	—	—
47,300	24,000	1,40,000	—	—	—	—
3,000	—	—	1,10,000	1,200	2,000	—
—	—	—	—	—	—	—
30,707	21,21,309	91,700	—	—	—	—
—	—	—	—	—	—	—
10,000	—	—	—	—	—	—
5,450	—	—	—	—	—	—
1,500	—	—	—	—	—	—
—	—	—	—	—	—	—
2,22,222	22,222	—	—	—	—	—
10,001	—	—	—	—	—	—
—	—	—	—	—	—	—
5,275	—	—	—	—	—	—
—	—	—	—	—	—	—
2,842	1,00,000	1,00,000	—	—	—	—
—	—	45,000	—	—	—	—
6,77,224	11,03,858	66,72,427	1,15,32,422	12,72,272	6,05,120	2,21,222
37,624	61,225	2,65,127	6,05,224	22,722	25,220	32,221

APPENDIX, No. 14.

COPIES of Enclosures, &c. to the Reports of the Calcutta Civil Finance Committee, relative to the
BOMBAY MARINE, dated respectively 19th April and 14th June 1830.

ACCOUNTS relating to the Trade between *India* and the *Persian Gulf*, &c.

STATEMENT of the VALUE of MERCHANDISE, &c. Imported and Exported between *Calcutta* and
the *Arabian* and *Persian Gulfs*, from the 1st May 1821 to the 30th April 1828.

	IMPORTS				EXPORTS			
	TOTAL.	Merchandise.	Treasure.	Horses.	TOTAL.	Merchandise.	Treasure.	Horses.
	Sa. Rs.	Sa. Rs.	Sa. Rs.		Sa. Rs.	Sa. Rs.	Sa. Rs.	
1821-22	36,25,178	11,62,152	24,63,026	—	47,40,902	47,40,902	—	—
1822-23	38,54,718	16,48,853	22,05,865	—	36,64,404	34,64,404	—	—
1823-24	24,18,321	13,05,497	11,12,824	—	34,15,597	34,15,597	—	—
1824-25	18,19,883	12,56,512	5,63,371	—	27,13,344	27,13,344	—	—
1825-26	22,53,338	12,48,552	10,04,786	—	31,47,972	31,47,972	—	—
1826-27	21,56,176	6,08,673	4,57,503	—	21,86,501	21,86,501	—	—
1827-28	22,27,048	12,52,207	2,80,241	—	22,54,434	22,52,421	1,913	—
Grand Totals	2,10,02,762	85,97,046	86,07,265	—	2,10,02,762	2,10,02,762	1,913	—
Average per Ann. Rs.	24,54,968	9,55,790	9,56,445	—	24,54,968	24,54,968	144	—

II.—FINANCE.—COMMERCIAL.

853 II. FINANCE.
Commercial.

STATEMENT of the SHIPS and TONNAGE Arrived at and Departed from *Calcutta*.

APPENDIX,
No. J f.

continued.
Trade between
India and the
Persian Gulf, &c.

ARRIVALS.					DEPARTURES.				
	ENGLISH.		ARAB.		ENGLISH.		ARAB.		
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	
1821-22 ..	11	4,466	16	7,770	15	6,748	18	7,961	
1822-23 ..	10	4,071	11	4,800	10	4,261	10	4,117	
1823-24 ..	12	4,617	10	4,581	6	1,883	9	4,385	
1824-25 ..	3	956	10	4,378	4	1,752	7	3,455	
1825-26 ..	2	505	11	4,954	7	2,938	10	3,641	
1826-27 ..	3	902	11	4,547	17	6,525	8	3,273	
1827-28 ..	9	3,604	15	6,256	9	3,958	14	6,259	
Total ..	50	19,121	84	37,286	68	28,065	76	33,091	
Average ..	7	2,731	12	5,326	9	4,009	11	4,727	

Port to which the Ships belonged				Port to which the Ships belonged			
Bengal 36	} 50.	Muscat	} 84	Bengal 54	} 68.	Muscat	} 76
Bombay 14		and Bushire		Bombay 14		and Bushire	

STATEMENT of the AMOUNT of CUSTOMS collected on the IMPORT TRADE from the *Arabian and Persian Gulfs*; from the 1st May 1821 to the 30th April 1828.

	TOTAL.	Customs at 5. 7½ and 10 per cent.	Customs on Foreign Articles, at 2½, 5, 7½, and 10 per cent
1821-22	89,637	34,661	54,976
1822-23	1,20,460	40,307	80,153
1823-24	94,174	40,968	53,206
1824-25	98,263	77,016	21,247
1825-26	1,01,039	82,760	18,279
1826-27	51,906	35,794	16,112
1827-28	4,00,304	38,907	61,397
Sicca Rupees	6,55,783	3,50,422	3,05,361
Average per Ann., Rs.	93,683	56,060	43,623

N.B.—The following articles not subject to Duty on Importation at this Port —
Treason, Homes, Precious Stones, and Pearls.

Board of Customs,
13th March 1828

(Signed) W PALMER,
Acting Secretary

APPENDIX,
No. 14.
continued
Trade between
India and the
Persian Gulf, &c.

STATEMENT of the VALUE of MERCHANDIZE, &c. Imported and Exported between the Madras Territories and the Persian Gulf; from the 1st May 1821 to the 30th April 1828.

	IMPORTS.				EXPORTS.			
	TOTAL.	Merchandise.	Treasure.	Horses.	TOTAL.	Merchandise.	Treasure.	Horses.
1821-22	92,862	55,575	27,787	9,500	20,90,821	20,90,821	—	—
1822-23	2,24,240	1,06,746	89,094	28,400	85,040	85,040	—	—
1823-24	1,98,144	1,41,018	28,826	28,300	54,156	54,156	—	—
1824-25	26,643	11,143	15,500	—	83,416	80,416	3,000	—
1825-26	66,326	42,050	24,276	—	3,67,802	3,67,802	—	—
1826-27	8,361	2,580	5,781	—	1,07,009	1,07,009	—	—
1827-28	17,960	14,110	3,850	—	4,25,975	4,22,788	3,187	—
Madras Rupees ..	6,34,536	3,73,222	1,95,114	66,200	32,14,219	32,08,032	6,187	—

(Signed) GEORGE J. HADLOW.
Reporter on External Commerce, &c.

STATEMENT of the SHIPS and TONNAGE Arrived at and Departed from the *Madras Territories and Persian Gulf.*

II.—FINANCE.—COMMERCIAL.

855 II. FINANCE.
Commercial.

APPENDIX,
No. 14.
continued.
Trade between
India and the
Persian Gulf.

ARRIVALS.			DEPARTURES.					
	ENGLISH.		ARAB.		ENGLISH.		ARAB.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1891-92	6	2,139	2	950	2	1,112	—	—
1892-93	10	3,612	3	1,525	—	—	—	—
1893-94	7	2,530	3	895	8	1,028	15	2,253
1894-95	4	1,581	—	—	1	305	28	3,677
1895-96	1	125	4	1,350	8	490	25	3,838
1896-97	—	—	—	—	—	—	—	—
1897-98	—	—	4	780	1	150	—	—
TOTAL	28	9,987	16	5,500	20	3,085	68	9,798

APPENDIX,
No. 14.
continued.
Trade between
India and the
Persian Gulf, &c.

STATEMENT of the VALUE of MERCHANDIZE, &c., Imported and Exported between the *Madras* Territories and *Arabia* ;
from the 1st May 1821 to the 30th April 1828.

	I M P O R T S.				E X P O R T S.			
	TOTAL.	Merchandise.	Treasure.	Horses	TOTAL.	Merchandise.	Treasure	Horses.
1821-22	75,693	10,093	65,600	—	4,57,736	4,52,814	4,922
1822-23	1,98,159	14,532	1,83,627	—	6,24,508	6,22,108	2,400
1823-24	1,61,578	18,451	1,43,127	—	8,31,180	8,31,180	—
1824-25	1,17,390	20,118	97,272	—	7,05,356	7,05,356	—
1825-26	2,85,288	24,923	2,60,365	—	13,55,328	13,55,328	—
1826-27	3,94,373	17,661	3,76,712	—	11,34,850	11,32,250	2,600
1827-28	6,31,445	18,890	6,12,555	—	12,39,289	12,34,289	5,000
M.Rs.	18,63,926	1,24,668	17,39,258	—	63,48,247	63,33,325	14,922	—

(Signed) GEORGE J. HADOW,
Reporter on External Commerce, &c.

STATEMENT of the SHIPS and TONNAGE Arrived at and Departed from the *Madras* Territories and *Arabia*.

II.—FINANCE.—COMMERCIAL.

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II. FINANCE.
Commercial.

APPENDIX,
No. 14.
continued.
Trade between
India and the
Persian Gulf, &c

ARRIVALS.				DEPARTURES.			
	ENGLISH.		ARAB.	ENGLISH.		ARAB.	
	Ships.	Tons.		Ships.	Tons.		
1891-92	1	380	—	not specified.	—	—	—
1892-93	not specified.	—	—	not specified.	—	—	—
1893-94	5	572	20	17	2,289	143	21,487
1894-95	3	648	19	5	835	127	19,867
1895-96	5	272	34	26	3,565	185	28,700
1896-97	10	2,910	23	22	3,821	153	26,206
1897-98	18	3,936	50	39	5,339	197	29,252
TOTAL	42	8,718	146	109	15,849	805	125,502

APPENDIX,
No. 14.
continued.
Trade between
India and the
Persian Gulf, &cSTATEMENT showing the AMOUNT of DUTIES levied in the *Madras* Territories upon Goods Imported from and Exported to the *Persian Gulf, Arabia, and the Red Sea*; from the 1st May 1821 to the 30th April 1828.

	IMPORT DUTIES.			EXPORT DUTIES.		
	M.Rs.	a.	p.	M.Rs.	a.	p.
1821-22	5,721	15	11	61,567	1	5
1822-23	11,460	8	7	65,259	7	10
1823-24	12,179	6	8	29,225	9	8
1824-25	1,973	0	8	29,281	7	4
1825-26	5,233	1	3	51,517	9	0
1826-27	1,745	8	1	31,673	1	2
1827-28	2,491	4	4	44,551	4	1
TOTAL	40,804	13	6	313,075	8	6

(Errors Excepted.)

Fort St. George,
Reporter External Commerce Office,
2d June 1829.(Signed) G J HADOW,
Coll. Sea Customs

II.—FINANCE.—COMMERCIAL.

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II. FINANCE.
Commercial.

APPENDIX,
No. 14.
continued.
Trade between
India and the
Persian Gulf, &c.

STATEMENT of the VALUE of MERCHANDISE, &c. Imported and Exported between Bombay and the Persian Gulf; from the 1st May 1821 to the 30th April 1828.

	IMPORTS.				EXPORTS.			
	TOTAL	Merchandise.	Treasure.	Horses.	TOTAL	Merchandise.	Treasure.	Horses.
1821-22 ..	33,85,197	8,27,843	22,65,954	2,91,400	33,59,384	33,54,884	4,500	—
1822-23 ..	36,79,169	8,54,655	24,42,314	3,82,200	30,91,782	30,91,782	—	—
1823-24 ..	39,44,529	9,99,845	24,05,084	5,39,600	41,59,485	39,31,414	2,28,071	—
1824-25 ..	35,31,303	11,23,564	19,79,139	4,28,600	37,15,960	36,51,895	64,065	—
1825-26 ..	31,78,411	11,89,467	15,43,444	4,45,500	43,43,780	43,43,780	—	—
1826-27 ..	34,22,128	14,44,086	14,69,642	5,08,400	41,91,821	41,81,021	10,800	—
1827-28 ..	32,05,662	18,08,812	8,63,250	5,33,600	33,66,175	33,55,175	11,000	—
Rupees	2,43,46,399	82,48,272	1,29,68,827	31,29,300	2,62,28,387	2,59,09,951	3,18,436	—

APPENDIX
No. 14.
continued.
Trade between
India and the
Persian Gulf, &c.

STATEMENT of the SHIPS and TONNAGE Arrived at and Departed from Bombay.

ARRIVALS					DEPARTURES.				
ENGLISH.			ARAB.		ENGLISH.			ARAB.	
Ships.	Tons.	Ships.	Tons.		Ships.	Tons.	Ships.	Tons.	
1821-22 ..	24	8,964	4	1,724	12	4,527	4	2,239	
1822-23 ..	19	7,665	4	1,794	9	3,695	3	1,712	
1823-24 ..	13	5,086	8	3,605	3	953	6	3,228	
1824-25 ..	4	1,239	6	3,131	—	—	5	1,809	
1825-26 ..	3	1,283	6	2,573	3	1,630	6	2,083	
1826-27 ..	7	3,092	3	992	5	1,757	3	2,590	
1827-28 ..	14	5,697	3	781	4	1,888	1	251	
Total ..	84	33,026	34	14,600	36	14,450	28	13,912	

Port to which the Ship belonged				Port to which the Ship belonged			
Bengal ..	.. 47	.. 28	Muscat ..	Bengal ..	.. 7	.. 20	Muscat ..
Bombay ..	.. 37	.. 6	Bushire ..	Bombay ..	.. 29	.. 8	Bushire ..

II.—FINANCE.—COMMERCIAL.

STATEMENT of the Amount of Customs collected on the Import Trade from the *Persian Gulf*; from 1st May 1821 to 30th April 1828.

[illegible]

N.B.—The following articles not subject to Duties on Importation at this Port :—
Treasure, Horses, Diamonds, Jewellery (country, when old), Pearls. Grain.
There are no Duties on the Exports to Gulf.

**Bombay, Office of
Reporter General on External Commerce.
17th February, 1829.**

(Signed) **THOS. FLOWER,**
Reporter General.

APPENDIX,
No. 14.
continued
Trade between
India and the
Persian Gulf, &c

STATEMENT of the VALUE of the TRADE between India and the Persian Gulf: from the Year 1821-22 to 1827-28.

	BENGAL.		MADRAS.		BOMBAY.	
	Imports.		Exports.		Imports.	
	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.
1821-22	36,25,178	47,40,902	92,862	20,90,821	33,85,197	33,59,384
1822-23	38,54,718	34,64,404	2,24,240	85,040	36,79,169	30,91,782
1823-24	24,18,321	34,15,597	1,98,144	54,156	39,44,529	41,59,485
1824-25	18,19,883	27,13,344	26,643	83,416	35,31,303	37,15,960
1825-26	22,53,338	31,47,972	66,326	3,67,802	31,78,411	43,43,780
1826-27	11,56,276	21,86,501	8,361	1,07,009	34,22,128	41,91,821
1827-28	21,27,048	22,54,434	17,960	4,25,975	32,05,662	33,66,175

From the above Statement it will be observed, that the average Value of the Trade between Calcutta and the Persian Gulf amounts annually to rupees 55,96,845; between the ports under the government of Fort St George and those in the Gulf of Persia, to rupees 5,49,819; and between Bombay and the Gulf, to rupees 72,24,071. The amount of Customs levied on the trade in question is small, owing to the exemption from duty which is allowed to the most valuable articles of import, such as Treasure, Jewels, and Horses. The import and export duty at Calcutta, on an average of the above seven years, was rupees 1,05,705; at Madras, rupees 46,610; and at Bombay, rupees 39,777. The subjoined Statements show what portion of this trade is carried on in English and what in Arab Ships.

APPENDIX,

AN ACCOUNT of the Quantity of INDIGO Imported into *Great Britain and Ireland*, in each Year, from 1780 and the Quantities

QUANTITIES IMPORTED INTO

		From the British Possessions in the East Indies, including the Cape of Good Hope, and St Helena	Foreign Possessions in the East Indies and the Philippine Islands	British West Indies, including Honduras	Foreign West Indies	United States of America	Florida.	Brazil.	Foreign Countries on the Continent of America, formerly under the dominion of Spain
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1780	..	..					
1781	..	..					
1782	..	..					
1783	..	..					
1784	..	..					
1785	..	154,201	—	302,011	1,800	682,441	11,000	—	—
1786	..	253,345	—	93,857	—	705,241	18,000	—	—
1787	..	303,046	—	62,253	458	910,817	1,070	—	—
1788	..	622,691	—	39,023	565	1,060,161	60,600	—	—
1789	..	371,460	—	21,818	2,749	828,194	4,000	—	—
1790	..	531,619	—	46,687	6,343	626,042	78,800	—	—
1791	..	465,198	—	38,807	263	580,132	8,881	—	—
1792	..	581,827	—	57,004	7,621	659,725	48,469	—	—
1793	..	881,854	—	35,112	17,415	625,945	42,964	—	—
1794	..	1,364,620	—	119,059	47,809	720,477	—	—	—
1795	..	2,861,684	—	115,569	4,735	574,429	24,479	—	—
1796	..	3,098,157	—	36,571	7,655	402,382	3,829	—	—
1797	..	1,754,233	—	60,072	226	276,597	6,344	—	—
1798	..	3,862,188	—	63,753	8,778	51,811	—	—	—
1799	..	2,634,070	—	92,798	122,080	97,000	535	—	—
1800	..	2,674,317	—	339,945	78,352	437,800	4,273	—	—
1801	..	2,112,045	—	580,029	25,000	166,136	—	—	—
1802	..	2,207,411	—	207,288	9,517	172,528	12,340	—	—
1803	..	2,529,508	—	39,777	15,913	2,661	57	—	—
1804	..	2,641,019	—	55,576	15,780	10,215	—	—	—
1805	..	4,008,871	—	25,122	28,229	25,513	—	—	—
1806	..	2,612,181	—	60,599	82,697	94,594	—	—	—
1807	..	5,323,147	—	33,633	159,584	139,819	—	—	48,757
1808	..	5,216,040	—	16,328	76,979	25,031	—	42,026	39,433
1809	..	2,108,086	—	513,163	18,115	3,018	—	74,167	5,019
1810	..	5,077,906	—	164,529	1,207	72,738	—	18,104	12,437
1811	..	4,382,642	—	325,411	14,794	26,672	—	20,511	43,337
1812	..	4,447,947	—	165,163	—	6,100	—	1,599	21,628
1813	..	The Records for this Year were destroyed by fire.							
1814	..	6,752,540	—	210,111	10,291	81	—	—	43,712
1815	..	6,543,222	—	30,494	36,846	—	—	253	2,959
1816	..	7,238,114	—	35,115	—	2,128	—	—	188
1817	..	4,964,843	—	19,428	2,247	6,559	—	—	—
1818	..	5,456,645	—	27,243	30,422	28,514	—	176	418
1819	..	3,088,694	—	54,250	43,110	6,284	—	948	24,518
1820	..	4,922,750	—	121,568	30,330	4,727	—	—	—
1821	..	3,935,833	—	78,305	5,799	2,770	—	—	—
1822	..	2,484,356	—	254,989	64,353	3,619	—	—	13,388
1823	..	6,553,354	—	539,552	39,445	8,044	—	50	62,078
1824	..	4,684,969	—	307,777	61,105	37,903	—	1,097	12,211
1825	..	6,139,785	1,650	281,026	29,025	100,600	—	11,130	132,199
1826	..	7,654,946	26,709	283,571	9,271	17,089	—	5,490	63,546
1827	..	5,384,998	21,530	230,669	127,417	58,606	—	2,063	129,517
1828	..	9,660,152	24,669	77,806	—	26,107	—	—	99,311
1829	..	5,965,128	17,263	612,921	70,502	56,318	—	12,877	336,687
1830	..	7,920,172	6,685	87,285	5,156	3,272	—	—	138,575

No. 15.

to the latest period up to which the Account can be made; specifying the Countries from which Imported, received from each.

GREAT BRITAIN FROM FOREIGN PARTS.

Germany	The Netherlands	France	Portugal, Madeira, and the Azores.	Spain and the Canaries.	Gibraltar.	Italy.	Other Countries, and Prine Indigo.	TOTAL from Foreign Parts
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
3,039	12,878	40,691	79,258	398,100	—	8,000	—	1,693,509
3,624	11,096	11,452	123,796	666,979	—	900	—	1,978,290
15,870	8,340	17,231	167,662	300,643	—	—	400	1,877,830
1,793	6,700	18,764	81,808	204,461	—	—	40	2,006,611
7,062	244,615	60,748	96,647	319,066	—	1,153	636	1,966,087
15,000	76,678	51,222	50,392	355,859	—	65	—	1,838,707
2,707	10,224	105,541	95,428	287,389	—	3,125	—	1,606,787
20,316	15,934	15,606	60,092	385,319	—	1,212	3,130	1,856,365
8,153	17,325	19,013	51,873	187,946	—	5,165	64,708	1,957,583
17,576	100,406	—	130,027	312,617	—	—	78,671	2,891,292
6,285	37,454	—	53,028	534,649	—	4,331	30,982	4,287,625
33,491	—	—	40,710	107,040	—	—	48,191	4,578,035
9,192	1,319	—	6,946	18,270	778	—	147,221	2,290,078
21,034	48	—	15,746	1,225	2,241	—	27,434	4,054,248
8,168	—	—	22,194	—	50	—	64,971	3,041,836
23,597	—	—	56,686	6,023	4,098	—	121,434	3,750,734
12,470	12,210	—	3,168	4,000	10,227	—	26,008	2,951,993
4,507	9,708	500	973	207,848	—	20,733	20,496	2,933,878
5,064	7,220	10,005	5,628	399,076	308	—	130,518	3,154,935
181	3,260	1,050	66,139	168,842	1,126	—	197,641	3,161,129
1,025	—	—	39,087	21,962	300	—	612,492	5,353,611
9,668	—	—	17,194	4,334	22,372	1,201	17,736	2,931,576
—	—	—	14,290	269	—	—	20,342	6,041,841
2,853	2,700	—	8,122	—	—	—	225,922	5,792,494
—	24,488	—	8,493	7,991	—	—	90,591	2,853,131
42,259	36,974	—	7,588	428,804	29,842	—	234,286	6,126,674
74,980	—	—	3,580	111,968	7,122	—	101,492	5,112,609
15,973	—	—	660	101,732	20,756	—	34,406	4,816,964
5	12	4	3,066	29,317	19,129	—	54,677	7,131,945
2,282	3,172	—	200	733	—	—	2,944	5,623,106
1,179	8,207	1,265	—	—	—	—	308	7,269,502
15,834	23,701	10,004	1,193	82,189	—	18,592	3	5,125,593
14,171	17,016	6,056	—	85,265	—	—	19,099	5,685,025
—	912	—	—	3	—	1	12	3,818,732
397	41	1,473	—	4,597	—	—	3	5,085,886
11	9,987	4,247	—	23,661	—	—	2,496	4,063,109
6,733	1,670	3,599	—	30,401	—	3,118	57,458	2,923,514
3,478	1,585	4,726	15	17,760	—	287	330	7,221,704
4,699	2,239	28,524	—	19,223	25,377	1,672	3,991	5,080,817
6,476	—	2,222	—	4,693	24,684	5,581	21,650	6,793,831
2,573	3,390	2,056	4	—	12,216	1	6,887	8,085,751
59,894	8,647	21,559	—	10,895	—	5,891	6,271	6,067,747
7,294	6,475	—	—	—	—	5,965	5,231	9,913,010
39,240	32,786	9	—	—	—	3,514	1,936	6,748,281
1,349	44,707	1,164	—	—	—	5,811	1,564	8,216,440

(continued.)

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The preceding Account—continued.

QUANTITIES IMPORTED INTO IRELAND FROM FOREIGN PARTS												
	From the British West Indies, including Honduras.	The British North American Colonies.	The United States of America.	Germany.	The Netherlands.	France.	Portugal.	Spain and Canaries.	Gibraltar.	Italy.	Guernsey and Jersey.	TOTAL from Foreign Parts.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1780	8,374	—	—	—	—	—	—	11,681	—	—	—	20,055
1781	1,794	—	3,188	—	6,720	237	—	2,000	—	—	—	13,047
1782	766	—	5,528	—	1,316	2,806	1,365	—	—	—	—	11,781
1783	200	—	5,983	—	960	5,475	—	2,896	—	—	—	15,514
1784	456	—	2,016	—	—	12,355	—	6,753	—	—	—	21,580
1785	—	—	8,026	—	—	11,055	84	13,639	—	—	—	32,804
1786	—	—	6,760	—	660	7,818	160	2,596	—	—	—	17,994
1787	621	—	10,673	—	—	5,544	350	1,760	—	—	—	18,948
1788	170	—	8,194	—	114	6,376	440	5,995	—	—	—	21,289
1789	160	336	18,047	—	—	11,317	1,704	28,541	—	—	—	64,038
1790	—	—	5,143	2,722	—	1,621	300	25,880	—	—	—	35,669
1791	530	178	3,486	—	—	1,420	868	30,127	—	—	—	36,009
1792	1,200	—	2,480	—	—	526	150	14,438	—	450	—	19,244
1793	1,146	—	3,468	—	—	—	868	18,704	—	—	—	24,066
1794	190	—	5,569	—	—	—	6,776	31,607	—	896	1,400	46,738
1795	—	—	10,140	—	—	—	34	32,123	—	—	—	51,495
1796	1,576	—	3,043	—	—	—	122	24,136	—	—	—	29,767
1797	—	—	3,146	—	—	—	464	1,000	—	—	—	4,610
1798	5,080	—	—	—	—	224	1,312	—	—	—	—	6,616
1799	—	—	2,400	—	—	—	—	—	—	—	—	2,400
1800	4,010	—	2,676	—	—	—	—	—	—	—	—	6,686
1801	2,240	—	—	—	—	1,792	—	—	—	—	—	4,032
1802	1,232	—	4,544	—	—	—	—	6,202	—	—	—	11,078
1803	3,626	—	300	—	—	—	—	1,3536	—	—	—	17,462
1804	800	—	—	—	—	—	—	15,906	—	—	—	16,706
1805	256	—	600	—	—	—	—	10,000	—	—	—	10,856
1806	23,816	—	320	—	—	—	2,902	5,760	—	—	—	32,807
1807	840	—	200	—	—	—	—	2	—	—	—	1,042
1808	2,885	—	—	—	—	—	142	—	78	—	83	3,188
1809	13,267	—	380	—	—	—	400	—	—	—	—	14,047
1810	329	—	1,775	—	—	—	—	—	—	—	—	2,104
1811	2,409	—	5,720	—	—	—	—	—	—	—	650	8,788
1812	7,539	—	644	—	—	—	—	300	—	—	806	9,289
1813	3,714	—	—	—	—	—	—	—	—	—	1,500	5,214
1814	—	—	—	—	—	—	—	—	—	—	—	—
1815	—	—	—	—	—	—	—	—	—	—	—	—
1816	1,173	—	212	—	—	—	—	375	—	—	—	1,760
1817	—	—	—	—	—	—	—	—	—	1,007	—	1,007
1818	—	—	635	—	—	—	—	392	—	—	—	2,017
1819	—	—	—	—	—	—	—	—	—	—	—	—
1820	3,406	—	—	—	—	—	—	—	—	—	—	3,406
1821	—	—	—	—	—	—	—	—	—	—	—	—
1822	—	—	—	—	—	—	—	—	—	—	—	—
1823	7,446	—	—	—	—	—	—	—	—	—	—	7,446
1824	155	—	—	—	—	—	—	—	—	—	—	155
1825	—	—	—	—	—	—	—	—	—	—	—	—
1826	—	—	—	—	—	—	—	—	—	—	—	—
1827	—	—	—	—	—	—	—	—	—	—	—	—
1828	—	—	—	—	—	—	—	—	—	—	—	—
1829	—	—	—	—	—	—	—	—	—	—	—	—
1830	—	—	—	—	—	—	—	—	—	—	—	—

APPENDIX No. 16 (1).

LETTER from G. G. DE H. LARPENT, Esq. to T. P. COURTENAY, Esq., dated
28th May 1827.

Sir :

By desire of the East-India Trade Committee, I take the liberty of transmitting to you the accompanying copies of two applications, under date the 30th June and 1st November 1825, which were made to the Court of Directors of the East-India Company by the merchants in London concerned in the trade of India. They relate to the disadvantages to which the private trade is exposed in competing with the Company for articles of the produce or manufacture of India, for the purposes of investment ; and more particularly the article of silk, which has become an object of much importance in the trade between India and Great Britain.

The memorial fully explains the insurmountable nature of the difficulties which the private traders have to contend with, and it was hoped that it would have received the early and favourable attention of the Honourable Court :

Having however remained unnoticed for so long a period, it has been deemed expedient respectfully to submit the same to the consideration of the Board of Commissioners for the Affairs of India, through whose intervention the East-India Trade Committee trust they will obtain for the private traders in India that redress which, under the circumstances of the case, they may seem justly entitled to.

I have, &c.

(Signed) G. G. DE H. LARPENT,
Chairman.

(Enclosure No. 1.)

LETTER from certain Mercantile Firms in *London* to the Court of Directors of the
East-India Company, dated 30th June 1825.

Honourable Sirs :

We, the undersigned merchants and agents in London connected with the trade of the East-Indies, beg leave to acquaint your Honourable Court that urgent representations have been made to us by certain British merchants in Calcutta, on the subject of the very serious disadvantages which the private traders have to encounter in their endeavours to procure articles of the produce or manufacture of the interior of India ; for the purposes of a return investment, in exchange for the produce and manufactures of this country, in consequence of the existing commercial Regulations of the Bengal Government.

Impressed with the importance of these Regulations, we have comprised them in the following statement, to which we take the liberty of soliciting the attention of your Honourable Court.

It may be assumed that the Act 55 Geo. III. c. 155, by which the Charter of the East-India Company was modified and renewed, had distinctly for its object a separation of the several capacities of the East-India Company as ostensible sovereigns of India and as a trading corporation. Any Regulations, therefore, of the East-India Company, or its Governments in India, tending to render its political power subservient to its commercial interests, may unquestionably be considered a contravention of the spirit of that Act.

APPENDIX,
No. 16 (1).
Regulation of the
Bengal
Government
detrimental to the
Trade
of Individuals

Letter
from Merchants in
London
to the Court of
Directors ;
30th June 1825.

APPENDIX,
No. 16 (1).
continued.
Letter
from Merchants in
London
to the Court of
Directors;
30th June 1825.

It is the object of the present remarks to show, that so long as the 31st Regulation of the Bengal Government of the year 1793 remains unrepealed, the East-India Company avails itself of its political authority to increase its mercantile profits; and by narrowing, if not altogether excluding, competition, secures to itself an undue preference over the private trader. That Regulation is intitled as follows:—"A Regulation for re-enacting, with modifications and amendments, the Rules passed on 23^d July 1787, and subsequent dates, for the conduct of the commercial residents and agents, and all persons concerned or employed in the provision of the Company's investment;" and the following is an analysis of its provisions, so far as the public is interested:—"No person in balance to the Company in any transaction connected with the provision of its investment or under engagement, can withdraw from its employ until such balance be paid or goods delivered." Sec. 2.—"Persons who have dealt with the Company on account of its investment, must give the previous notice of two weeks before they can withdraw." Sec. 3, c. 3.—"The goods manufactured by persons under engagement or indebted to the Company are liable first for the claims of the Company. The parties cannot work for themselves or others. Penalty." Sec. 3, c. 4 and 6.

"When a contractor has not performed his contract for delivery of goods he is to be put under the restraint of peons." Sec. 3, c. 5.—"List of persons employed in the Company's investment to be exposed in the catchery of the Pergunnah, to be regularly corrected, and sent quarterly to the Court." Sec. 4.

"Penalty for persons who may buy of the producers with a knowledge of their engagements to the Company; the knowledge to be evidenced by circumstances, or the fact of the goods having the Company's mark upon them." Sec. 5.

"Persons not to interfere in any way to prevent people from treating with or taking advances from the Company." Sec. 6.—"Officers of Government, landholders, and others, are not to behave with disrespect to the commercial residents or their officers, and to afford assistance for the protection of persons employed by the Company, and the security of the investment." Sec. 7.

"No person employed in the provision of the Company's investment shall be liable to be summoned by a Zemindar or his officer on account of the ground-rent. The goods and advances belonging to the Company shall not be distrained for ground-rent." Sec. 9, c. 2.

"Persons prosecuting individuals employed in the Company's investment must allege the fact. The prosecuted exempted from the ordinary process of the courts, and to be proceeded against through the commercial resident, or his deputy appointed by him. These may tender security themselves, or decide on the sufficiency of that tendered by the prosecuted." Sec. 10, c. 1.

"Persons employed in the Company's investment not liable to the ordinary criminal process." Sec. 10, c. 4 & 5.

"In cases where manufacturers are employed by several parties other than the Company, they shall deliver goods according to priority of engagement." Sec. 11.

"Where a decree may be passed against a person employed in the Company's investment, on an engagement subsequent to the origin of the party's dealings with the Company, it shall provide for the prior satisfaction of the Company's claims.

"Before execution of any decree against a person registered as employed in the Company's investment, the judge shall require the commercial resident, 1st. To state whether, at the time of the engagement decreed, the party were in the employ of the Company; 2^d. To state whether the Company have any and what claim on him; 3^d. To prove such claim. The claim of the Company shall be first made good out of the defendant's property, whose person shall not be liable to attachment for the claim of the individual." Sec. 12.

"The

"The commercial resident, in dealing on account of his own private trade, shall not make the Company's prices the standard of his own." Sec. 15, c. 4.

When it is considered how strong the habitual feelings of deference to authority are in India, and the mode in which the raw goods or manufactured produce of that country are obtained, namely, that of advance, the character assigned to this Regulation in the preceding paragraph will not be thought too strong. By it, no persons in balance to the Company, or engaged in any way in the provision of their investment, can withdraw from their employ; they cannot work for themselves or others.

If they do not fulfil their contract, they are put under restraint of peons, and the goods they manufacture or their articles of produce are liable first to the Company, although they may be indebted to others: thus, if a private merchant has contracted with a producer, and made advances, the moment the latter gets his name enrolled in the list of those employed in the provision of the Company's investment, the Company take precedence, both in obtaining his produce and preventing his working for any other person. Inducements are also held out, by certain immunities which are granted to those employed under the Company. Sec. 6 and 7 directs the officers of Government, &c. to afford them protection; by cap. 2, sec. 9, no person so employed shall be liable to be summoned for ground-rent; and by sec. 10, such persons are exempted from the ordinary process of courts of justice, and can only be proceeded against through the commercial resident, who has the charge of the Company's investment.

Whilst the Company in their commercial capacity enjoy the restrictive privileges which the Regulation in question confers, it can hardly be denied that they possess a virtual monopoly in every article of the internal trade of India which can be selected for investment.

Raw silk, saltpetre, and cotton, are at present the principal articles of trade which the Company purchase in the interior through the agency of their commercial residents.

It has long been a subject of great complaint with the private merchant, that he was unable to obtain sufficient supply of raw silk; and the relative proportions of the import by the Company and private traders of this article, now become of great importance to a rising manufacture in this country, will illustrate the correctness of the conclusions deduced from the provisions of the Regulation under examination.

The Company, under the exercise of this assumed authority, shut out the private trader from a fair competition in the purchase of this important article; and thereby securing to themselves a monopoly of the industry of the native population, they check that excitement to exertion, and consequently to production, which the simultaneous demands of the private merchants and the Company, if placed upon an equal footing, would necessarily create.

Muslins, piece-goods, and other articles have been, and may be again, objects of the Company's investments, as their funds accumulate; and we have recently seen their attention directed to indigo; so that if they were to bring into general exercise the power assumed under the Regulation now complained of, they might effectually crush the enterprise of the private merchants, exclude them from the possibility of effecting returns for the increasing trade to that country in British manufactures, and curtail the general advantages which would otherwise be derived by Great Britain and India from the connexion subsisting between the two countries.

It ought also to be observed, that whilst the private trader is thus excluded from a fair competition with the Company, the Company's commercial residents are permitted to engage as agents in the purchase of goods, and derive from their official influence an obvious influence over any private competitor.

In forwarding to your Honourable Court the above statement, we cannot refrain from respectfully repeating that the principle on which it proceeds is, that the Regulation in question, by giving undue advantage to the Company in their commercial character over

APPENDIX,
No. 16 (1).
continued
Letter
from Merchants in
London
to the Court of
Directors,
30th June 1825

the private merchant, is contrary to the spirit and letter of the Act by which the trade of British India was opened to the public, and opposed to the present liberal policy of the times. It appears to us it was not the intention of the Court of Directors, on the passing of that Act, that any existing Regulation having such a tendency should remain in force; and this may be inferred from the instructions transmitted by the Honourable Court to the Bengal Government, in their public letter under date the 6th September 1813, paragraph 23, wherein they observe: "We cannot omit, upon the present occasion, expressing our expectation that all our servants shall conduct themselves with liberality and candour, and act up to the full spirit of the Legislature; so that if the traders should be disappointed in their views, they may have no ground for imputing their disappointments to any deviation on our part from the principle on which the trade is opened to them."

It may however be alleged, that the Honourable Company, without contending for their rights to the powers enjoyed by them under this Regulation for the purpose of commercial rivalry with the private traders, may fairly demand their continuance as indispensable to the regular and certain remittance of that part of the revenues of British India applicable to the payment in this country of territorial and political charges, which being connected with the sovereignty of the Company, the Regulation is considered justifiable, and consonant therefore to the provisions of the Act.

The question thereby assumes a new shape, and the parties at issue will be, not the East-India Company as merchants against individual merchants, but the East-India Company acting for the benefit of the people of India against merchants influenced by their own particular interests; and therefore that the private interests of the latter should be made to yield to the more extensive benefit to be reaped by the whole Indian community. If this argument were sound, it would be a conclusive bar to the prayer of the private merchants; but they contend that it is altogether untenable and incorrect upon general principles, and that the circumstances attaching to the particular case in question do not form any exception thereto. The object of the Company is, how best to supply funds in this country to meet their present and growing expenses of a political nature. Upon general principles it can scarcely be doubted that, to enable this remittance to be made with the least possible burthen to the people of India, that the wisest plan would be to encourage the increase of capital in India, to ensure its distribution into the most natural and therefore the most beneficial channels, and by wise legislation to promote the cheapest cultivation of Indian produce and the best mode of its remittance to this country. To effect this, it appears to us expedient that the restrictions placed by the Regulation in question upon the industry of the native population should be removed, and a free and unshackled competition allowed to the private merchants, correspondent to the principles on which they were admitted by the Legislature into a participation of the trade with India

We have, &c.

(Signed)

FLETCHER, ALEXANDER, and Co.
COCKERELL, TRAIL, and Co.
BAZETT, FARQUHAR, CRAWFORD, and Co.
PALMERS, MACKILLOP, and Co.
RICKARDS, MACKINTOSH, and Co.
W. J. and J. BYRNIE.
M'LACHLAN, MACINTYRE, and Co.
FAIRLIE, BONHAM, and Co.

R. SCOTT, FAIRLIE, and Co.
INGLIS, FORBES, and Co.
SMALL, LANE, and Co.
WM. H. TARBUTT.
FINLAY, HODGSON, and Co.
Z. MACAULAY and BABINGTON.
HUNTER, and Co.
H. BLANCHARD.

(Enclosure No. 2.)

LETTER from Messrs. FLETCHER, ALEXANDER, and Co., to J. DART, Esq., dated
London, 1st November 1825.

Sir :

IN conjunction with the other principal merchants of London connected with the trade of the East-Indies, we addressed a letter, under date the 30th June last, to the Honourable Court of Directors of the East-India Company, with a statement pointing out how the interests of private traders in India are affected by the injurious tendency of the existing commercial Regulations of the Bengal Government; and we solicited the attention of the Court to the same, with the view of obtaining a removal of the restrictions therein complained of.

Not having as yet been honoured with a reply, we are induced, on behalf of ourselves and the other parties to the letter in question, to request to be informed whether the subject has been brought under the consideration of the Honourable Court, and if it has been deemed expedient to refer the application to the Bengal Government; as, in the latter case, we shall apprise the parties in Calcutta with whom the representations originated of the circumstance, in order that they may avail themselves of the opportunity of substantiating what has been alleged in respect to the practical effects of the said Regulations.

We are, &c.

(Signed) FLETCHER, ALEXANDER, and Co.

APPENDIX, No. 16 (2).

LETTER from T. P. COURTENAY, Esq. to G. G. de H. LARPENT, Esq., dated
3d August 1827.

Sir :

IN reply to your letter dated the 28th May last, respecting the representations to the Court of Directors of the East-India Company, from merchants in London connected with the trade with the East-Indies, as to the disadvantage alleged to result to private traders from the existing commercial Regulations of the Bengal Government, I am directed by the Commissioners for the Affairs of India to acquaint you that a despatch to that Government has been prepared, directing modifications to be made in their commercial code, for the purpose of removing the grounds of complaint.

I am, &c.

(Signed) T. P. COURTENAY.

APPENDIX, No. 16 (3).

A. D. 1829. REGULATION IX.

A REGULATION for amending some of the Rules of Regulation XXXI. 1793, and the corresponding Rules for Benares and the Ceded Provinces, and for placing the Commercial Agents of the East-India Company on the same footing towards Natives of the country as other persons.—Passed by the Governor-general in Council on the 9th June 1829, corresponding with the 28th Jeyte 1236, Bengal era; the 22d Jeyte 1236, Pusly; the 29th Jeyte 1236, Willaity; the 8th Jeyte 1886, Sumbut; and the 6th Zehijja 1244, Higeree.

REGULATION XXXI. 1793, and the corresponding enactments for Benares and the Ceded and Conquered Provinces, were passed for the purpose of prescribing rules for the conduct

Preamble.

Letter from T. P. Courtenay, Esq., to G. G. de H. Larpent, Esq. 3d August 1827.

APPENDIX,
No. 16 (1.)
continued.

Letter from Messrs. Fletcher, Alexander, and Co to J. Dart, Esq.; 1st Nov. 1825

APPENDIX,
No. 16 (3).
continued.

conduct of the commercial residents in their dealings with native weavers and others employed in the provision of the investment of the East-India Company: those rules were then required no less as a safeguard against abuse of power by the commercial residents and agents for the Company, than for the protection of the commercial officers against fraud and embezzlement, and for ensuring the execution of the contracts entered into by these officers. At the present day the same reasons do not exist for prescribing by special regulation the course to be observed in respect to contracts entered into for the provision of articles of the Honourable Company's investment: it has accordingly been deemed expedient, in order to remove the appearance of favour and preference in the Legislature, which the existence of a special enactment of the kind is calculated to excite, to rescind the provisions of the existing Regulations giving such a preference, and to leave the commercial residents, and other agents of the Company, to follow the same process of law in the enforcement of contracts and in their other dealings with the natives of the country as individual traders. The following Rules have accordingly been passed, to be in force within the territories subject to the Presidency of Fort William, from the date of the promulgation of this Regulation.

Section 2 to 18 of Regulation XXXI. 1793, and the corresponding rules for Benares and the Ceded Provinces, rescinded

Commercial residents to be subject to jurisdiction of courts, civil and criminal, as other persons being British subjects

Proviso for public suits

II. Sections 2 to 18 inclusive, of Regulation XXXI. 1793, with the explanatory Rules of sections 3 and 4, Regulation IX. 1801, extended to Benares by section 2, Regulation IV. 1805, also the corresponding sections of Regulation XXXVII. 1803, for the Ceded Provinces, are hereby rescinded.

III. *First.* Commercial residents and other officers providing articles for the investment of the Honourable East-India Company, or otherwise employed in purchasing or procuring goods for purposes of trade, shall sue and be sued, and be subject to the process and jurisdiction of the civil or criminal courts of the country, in the same manner as the agents and factors of any other merchants, saving always the privileges and immunities they may enjoy as British subjects; and subject to the rules and restrictions contained in the general Regulations respecting suits conducted or defended on account of the Honourable Company, or otherwise in their public capacity.

Workmen, contractors, and others, to be served with process of civil or criminal courts, as other persons

Second. Native workmen and other persons, weavers, silk-winders, &c., in the employ of commercial residents, also persons under engagement to deliver articles to the commercial officers of the Honourable Company, shall be and are hereby declared to be subject to the same process, civil and criminal, of the courts and public officers of the country, as other natives living within the jurisdiction of the said courts and public officers respectively, and no distinction shall be made in the form and manner of serving the process on them.

Plaint against commercial residents for official acts, when filed, copy to be sent to Board of Trade; who will inform the court within six weeks whether it is to be defended as a public suit.

Failing intimation of its being public, to be treated as a private action.

IV. In modification of the rule contained in section 3, Regulation II. 1814, it is hereby prescribed and provided, that when a petition of plaint against a commercial resident or other commercial officer amenable to the jurisdiction of the court shall be lodged in any court of civil judicature, notice of the same shall be sent in the manner prescribed by section 13, Regulation XXXI. 1793, to the said officer, and a copy of the same shall be forwarded to the Board of Trade, who shall inform the Court, within six weeks from the date of their receipt of the petition, whether the suit shall be defended as a government action or at the risk and cost of the officer sued. If no intimation be received by the court within the period stated, due allowance being made for the period occupied in the conveyance of letters to and from by the public dawk, the case shall proceed, and be carried to judgment, as a personal action against the commercial resident or other officer sued.

APPENDIX, No. 17.

EXTRACT GENERAL LETTER from the Government of *Prince of Wales' Island*, to the Court of Directors, dated 30th April, 1830.

State of the Trade
of Prince of Wales'
Island

Trade Settlements.

Para. 38. A FULL and interesting Minute on the state of the trade of these Settlements is recorded by our President. It is much to be regretted that the various statements from which the report has been compiled have been found so defective; but the importance of more accuracy has been so strongly pointed out in the President's Minute, as well as on other occasions, that it is to be hoped more dependence may be put in them in future. The body of the Minute contains a full comparative statement of the imports and exports for the year 1828-29, and at the conclusion will be found elucidatory remarks on the system of mercantile transactions and relations of these settlements for the last three years.

39 Mr. Ibbetson having supposed that some remarks which the Honourable President thought proper to make on the careless nature of the statements reflected on him, recorded an explanatory Minute, which will be found with the other papers, as will also be one in reply by our President, in which he disclaims entirely any application of these remarks to Mr. Ibbetson in a retrospective view.

(Enclosure No. 1.)

COPY MINUTE of R. FULLERTON, Esq., President of *Prince of Wales' Island*, dated 29th April 1830. (Enclosure, No. 1)

REPORT on the Trade of the three Settlements, Prince of Wales Island, Singapore, and Malacca.

It has always been my intention to enter into a complete discussion as to the nature and extent of the trade of these settlements, as it has stood during the last three years; various other important and constantly occurring duties have hitherto prevented my directing sufficient time and attention to the subject, rendered further difficult by the want of clear definite statements and reports from the different settlements. With the exception of this settlement (*Prince of Wales' Island*), generally the seat of Government, and formerly of a custom-house, very little attention has been paid to the formation of these statements; they have been left to the clerks in the office, and the resident councillors at Singapore and Malacca seem to have signed without notice any statement put before them; the most glaring errors were discovered, an inquiry into which only brought to light further inaccuracies, and rendered the complete recapitulation of those for past years indispensable. I regret to say, therefore, that I am unavoidably compelled to confine my remarks to the statements for the year ending 30th April 1829, which having been compiled and re-examined, may be depended on, entering into retrospective observations only on reference to certain of the principal articles of trade which have been made the subjects of particular notice and inquiry.

It had previously been the practice to insert in the general statements the imports and exports at each Settlement, as well between each other as with places beyond their limits; the practice necessarily involved considerable repetition, and of course exaggeration, in the general statements. There is little produce at any of the settlements in the Straits; the trade consists, therefore, almost entirely of foreign import and re-export. Of the articles imported therefore at one settlement, many are supplied and landed at another, shipped again,

APPENDIX,
No. 17.
continued
(Enclosure, No. 1.)

again, and carried from port to port in search of a market: for example, out of 17,86,890 rupees of India piece-goods imported at Prince of Wales' Island by the general statement, the separate statement will show an export to Singapore of rupees 7,83,500, and an import of articles of the same description from the same place of 20,800. It was directed, therefore, that the general statements should include only the external trade; that is, the trade between the settlements respectively and places beyond their limits. For the showing of the intermediate trade between each relatively, it was directed that separate statements should be made, and on statements so made this report is prepared: they consist of three; for each settlement one of import, one of export externally, and one of the intermediate trade, with a general statement of the external trade, prepared under directions of Government. It must here however be generally observed, that no duty is collected, no regular custom-house established, nor any of those strict forms observed which fall necessarily to be observed where a revenue is to be received; the statements therefore are framed, it may be said, generally from the reports of the merchants themselves, as will appear by reference to the regulation for the registry of import and export; general permits are given, and merchants are allowed to land and ship from their own warehouse; the search of any is very slight. The strong objection made, and the clamour that is raised on any attempt at secreting, as interfering with the trade, and the absence of all revenue considerations, has induced the avoidance of all such secreting; so that, in fact, the report of the parties themselves forms the main source of our knowledge as to the extent and nature of the trade.

Trade of Prince of
Wales' Island
External

The trade of Prince of Wales' Island is carried on with the following places, as will appear in the statements, *viz.*: Calcutta, Madras, Bombay, England, China, Java, Ceylon, Siam, Coast of Tenasserim, Achcen, Dehli, Quedah, and a few petty native ports.

Calcutta, Imports
from

The imports for the year ending 31st April 1828 29, from Calcutta, amounted to sicca rupees 10,94,986, of which the principal articles were, opium, 7,10,400; India piece-goods, 1,84,500; rice, 82,750; wheat and grain, 10,640; gunnies, 15,000; India sundries, 10,978; oil, 22,500. The balance being made up of sundry petty articles, of which we may notice only the few British articles travelling for a market, *viz.*: iron, 20,000; British piece-goods, 17,500.

Calcutta, Exports to.

The total exports to Calcutta for the same year amounted to sicca rupees 3,57,126, of which the following articles were, pepper, 1,14,121; tin, 1,11,740; gold dust, 51,600; beetel nut, 37,755; rattans, 19,400.

The balance consisting of sundry petty articles unnecessary	
to repeat, the imports therefore being as above ...	Sa. Rs. 10,94,986
The exports	3,57,126

The difference is	Sa. Rs. 7,37,860
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to be made out by bills or transmission of specie. It is to replace this difference that the Government bills on Bengal are punctually taken.

Madras, Imports from.

The imports for the year as above accumulated to no less than 16,95,850, of which the principal articles were as follows: India piece-goods, 14,44,000; oil, 53,400; spices, 18,000; salt, 17,500; rice, 13,200; India sundries, 19,130; European sundries, 13,800; cotton, 15,250; tobacco, 8,750. The balance being made up of small articles; with the addition of a small quantity of British piece-goods sent for a market, 78,860.

Madras, Exports to.

The total exports to Madras during the same period in goods, were 2,38,766, of which the principal articles were as follows: pepper, 68,160; beetel nut, 40,776; metals, iron, lead, and tutenague, 42,480; China camphor, 11,200; benjamin, 14,240; raw silk, 15,600; sugar, 10,500; tin, 15,500; sundries, China, Java, 10,800; besides sundry other petty articles.

The

II.—FINANCE.—COMMERCIAL.

875 H. FINANCE.
Commercial.

The total imports being as above	...	...	...	Sa. Rs. 16,95,850
The exports in goods	...	...	...	2,38,765
The balance				Sa. Rs. 14,57,085

APPENDIX,
No. 17.
continued.

(Enclosure No. 1.)

remained, of which has been sent in dollars a sum equal to 3,19,960; a certain portion has no doubt been met by Government bills drawn on Madras for payment of troops. The export and import of specie is seldom correctly reported, but it is generally understood that, excepting the sum remittable by Government bills, the whole amount of Madras piece-goods imported is returned in silver, first, in Madras rupees, as far as procurable, next in dollars, and lastly in sicca rupees; and this trade is reckoned one of the great drains of specie from the Straits.

The total amount of imports from Bombay, during the year 1828-29, wore sicca rupees 2,65,290, of which the principal articles were as follows: brandy, 6,200; cotton, 27,600; wheat and grain, 8,700; opium, 36,000; India piece-goods, 23,100; salt, 21,700; India sundries, 45,700; with addition of a few minor items and of British piece-goods, sicca rupees 22,400, sent for a market.

Bombay, Imports from

The total exports to Bombay during the above year amounted to sicca rupees 2,30,146, composed principally of the following articles: beetel nut, 22,792; benjamin, 13,000; brassware, 13,000; dammer, 14,600; pepper, 5,808; rice, 7,500; sago, 3,016; spices, 3,125; sticklac, 5,750; sugar, 16,800; tin, 97,680; China sundries, 2,950; Straits ditto, 15,020; with addition of minor articles, amongst which are British piece-goods to the amount of sicca rupees 2,000.

Bombay, Exports to

The total imports being as above	...	...	...	Sa. Rs. 2,65,290
The exports	...	...	...	2,30,146
The balance is 35,144; but of silver coin there appears to have been an export to Bombay of a sum in dollars, Sa. Rs. 68,412*				14,834
				Sa. Rs. Mas. Rs. 12,806
				96,052

The total amount from England during the year amounted to sicca rupees 1,67,670, the items being, beer, 9,280; brandy and gin, 4,800; iron, 5,820; sheet copper, 9,000; British piece-goods, 77,500; wine, 6,400; Europe sundries, 53,600; woollens, 1,260. The above compose the whole of the imports.

England, Imports from

The total exports for the year to England in goods, amounted to sicca rupees 50,668, the items being as follows: ebony, 1,038; white pepper, 29,978; black pepper, 17,532; woollens, 240; China sundries, 1,288.

England, Exports to

The total imports being as above	...	...	...	Sa. Rs. 1,67,670
And the exports	...	...	...	50,668
The balance is				Sa. Rs. 1,17,002

To which export, however, may be added silver, as follows:

In dollars	...	...	...	Sa. Rs. 38,858
Sicca rupees	...	...	...	4,105
				42,963

The total imports from China amounted to sicca rupees 2,18,440, the articles being as follows: brassware, 4,100; camphor, 32,000; lutestring, 13,200; silks, 7,990; raw silks, 63,250; tobacco, 27,000; China sundries, 69,040.

China, Imports from

The exports during the year amounted to sicca rupees 9,65,834, the principal items being as follows: beetel nut, 2,05,411; beach-da-mer, 77,820; birds' nests, 1,41,140; birds' feathers, 54,000; Malay camphor, 30,000; cutch, 6,400; ebony, 34,000; ivory, 5,680; opium, 55,605; pepper, 1,11,422; satans, 14,140; rice, 15,015; spices, 48,375; tin, 86,321; tortoise-shell, 9,750; Straits sundries, 35,469; besides a few minor articles.

China, Exports to

Commercial

APPENDIX,
No. 17.

continued.

(Enclosure No 1)

The total exports therefore being as above	...	Sa. Rs. 9,65,834
The imports being	2,18,440

The excess of exports is	Sa. Rs. 7,47,394
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Nearly the whole of the exports are made on the Honourable Company's ships by the commanders: they are generally, it is believed, paid for in bills on Bengal: in former times, the practice used to be to pay in dollars, which tended materially to keep up the circulating medium for the general conduct of the trade. Since, however, the great alteration that has taken place in the exchange with England, instead of the import of specie from thence, it has become more advantageous to establish a credit on England, and through that medium on Calcutta, also drawing against it for the amount which the state of the markets may render it advisable to invest, thus saving the interest, which would be lost by bringing specie, the bills being drawn at such a run as to become due but a short time before the probable arrival of the ship in England with the China cargo, bought by the proceeds of the sale of the Straits produce. The trade, it will be observed, returns no specie to the Straits.

Java, Imports from. The imports from Java amounted only in goods to sicca rupees 37,312, consisting principally of Java cloth, 14,100; rice, 9,720; tobacco, 4,400; sundries, 2,223; and a few minor articles of silver: there was imported in dollars to the amount of 30,522 sicca rupees.

Java, Exports to. The exports amounted to 52,330 rupees, consisting principally of pepper, 18,000. India piece-goods, 29,500; sugar, 2,320; and a few trifling articles.

The exports being as above	...	Rs. 52,330
And the imports	37,312

The balance excess of exports is	Rs. 15,018
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But little trade can be carried on between Java and Prince of Wales' Island, Singapore intermediately situated affording a mart for exactly the same articles.

Ceylon, Imports from. The whole imports from thence during the year amounted only to sicca rupees 56,206, consisting of arrack, 26,208; beech-de-mer, 4,000; ebony, 14,028; oil, 9,121; India sundries, 2,850.

Ceylon, Exports to. The exports amounted to sicca rupees 23,450, consisting principally of the following articles: India piece-goods, 3,500; British piece-goods, 3,000; sugar, 7,216; China sundries, 6,354. The imports being 56,206, and the exports only 23,450, the excess of imports is 32,756.

Siam, Imports from. The total imports from Siam in goods amounted to sicca rupees 2,16,788, of which the following are the principal articles: beech-de-mer, 6,120; birds' nests, 13,080; oil, 1,843; paddy, 2,880; pepper, 4,810; India piece-goods, 4,800; rice, 4,800; sugar, 5,200; tin, 38,250; tobacco, 1,29,500; China sundries, 1,000; Siam sundries, 2,700: with a few minor articles of specie: there were imported in dollars to the amount of sicca rupees 6,315.

Siam, Exports to. The exports amounted to 96,093 in goods, of which the following were the principal articles: beetel nut, 3,523; opium, 26,950; India piece goods, 57,900; China tobacco, 7,360; with a few petty articles.

The imports being as above	...	Sa. Rs. 2,16,788
The exports	96,093

The excess of imports is	Sa. Rs. 1,20,695
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To the exports must be added dollars to the extent of sicca rupees 53,888. Considering that Singapore dealing in similar articles with Prince of Wales' Island, and exactly between

tween it and Siam, it seems rather surprising that this trade, small as it is, should continue.

The total imports amounted to sicca rupees 1,77,010, the principal articles being beech-de-mer, 9,000; birds' nests, 49,860; birds' feathers, 53,800; cutch, 9,280; Dhool wheat and gram, 7,500; ivory, 1,760; rice, 20,400; cardamums, 10,460; tortoise-shell, 3,480; Straits sundries, 9,960; besides a few articles.

Coast of Tenasserim,
Imports from.

The exports amounted to sicca rupees 1,55,152 in goods, the principal articles being, beer, 5,248; beetel nut, 8,109; brandy, 6,600; iron, 1,570; opium, 1,685; pepper, 1,044; India piece-goods, 11,500; British piece-goods, 21,600; raw silk, 12,000; spices, 1,812; sugar, 5,120; tobacco, 3,580; wines, 7,524; woollens, 12,815; China sundries, 30,265; Europe ditto, 14,698; India ditto, 8,313; besides a few minor articles.

Coast of Tenasserim,
Exports to.

The amount of imports being as above	Sa. Rs. 1,77,010
Exports	1,55,152

The excess of imports is	Sa. Rs. 21,858
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to which must be added an export of specie as follows: in dollars, 10,525; in sicca rupees, 17,000.

The above are the recently acquired provinces. The Europe articles exported there, it will be understood, are for the use of the European officers and troops there stationed. India and British goods probably find sale there to a considerable amount; the returns are principally for the China market. The islands on the Mergui Archipelago are the principal places where the important article birds' nests is produced, and were these countries once settled under the British Government, and the islands duly protected from plunder, a very great increase of trade might be expected.

The total imports from thence for the year amounted to sicca rupees 8,08,518, consisting principally of the following articles: beetel nut, 2,80,000; beech-de-mer, 18,120; bees'-wax, 2,465; benjamin, 34,000; birds' nests, 12,000; camphor, Malay, 88,000; coffee, 21,800; dammer, 21,800; paddy, 4,980; oil, 2,640; pepper, 2,21,448; India piece-goods, 37,500; rattans, 2,900; rice, 38,400; spices, 10,460; tortoise-shell, 9,000.

Acheen, Imports from.

The exports thither amount to sicca rupees 10,75,842, of which the following are the principal articles: brassware, 5,600; cotton, 34,200; iron, 8,700; lutestring, 24,000; opium, 3,74,070; India piece-goods, 3,62,500; British piece-goods, 74,400; raw silk, 4,200; salt, 6,120; sticklac, 90,550; tobacco, 10,240; woollens, 1,200; China sundries, 56,967; Europe sundries, 16,867; India sundries, 15,786; Siam sundries, 2,500; Straits sundries, 7,140; besides a few minor articles.

Acheen, Exports to.

The exports being as above	Sa. Rs. 10,75,842
The imports	8,08,513

The excess of exports is	Sa. Rs. 2,67,329
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To the imports must be added specie in dollars to the amount of sicca rupees 1,69,494.

This is a petty state on the Sumatra shore. The total imports from, were sicca rupees 2,04,905, consisting of bees'-wax, 1,625; pepper, 1,76,520; rattans, 25,000; Straits' sundries, 1,440.

Delhi, Imports.

The exports of this port amount to sicca rupees 1,58,930, in goods principally as follows: iron, 3,020; opium, 34,542; piece-goods, Europe, 94,000; raw silk, 10,800; salt, 12,600; tobacco, 3,600.

Delhi, Exports.

The imports being	...	...	Sa. Rs. 2,04,905
The exports	...	...	1,58,930
The excess of imports is	...	...	Sa. Rs. 45,975

To the exports must however be added specie in dollars to the amount of sicca rupees 73,675.

Quedah, Imports.

The total imports amounted to sicca rupees 2,21,200, composed of the following principally: birds' nests, 5,340; ghee, 2,000; paddy, 7,560; rice, 1,72,640; tin, 7,030; Straits sundries, 26,000.

Quedah, Exports.

The total exports from Quedah amounted to sicca rupees 1,35,930, in goods as follows: cotton, 3,960; iron, 1,600; sheet copper, 4,000; opium, 28,645; India piece-goods, 68,000; salt, 12,840; sugar, 1,275; tobacco, 6,240; China sundries, 2,520; India sundries, 2,600; Straits sundries, 4,250.

The total imports being	Sa. Rs.	2,21,200
And the exports	1,35,930

The excess of imports is	Sa. Rs.	85,270
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To the exports, however, must be added specie in dollars to the amount of sicca rupees 96,341. The principal item of trade is the rice imported for the consumption of the island.

Other Native Ports,
Imports from

These imports amount in all to sicca rupees 60,741, consisting principally of rattans, 16,550; tin, 41,181; Straits sundries, 1,400.

Other Native Ports,
Exports to

The exports being 60,635, consisting principally of opium, 16,850; India piece-goods, 33,500; raw silk, 1,200; salt, 2,580; sugar, 1,008; tobacco, 1,800; China sundries, 1,180; India sundries, 2,167.

The imports being	Sa. Rs.	60,741
The exports	60,635

The excess of imports is	Sa. Rs.	106
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To the exports must be added specie in dollars to the amount of sicca rupees 6,315.

From the foregoing, it appears that the total imports of goods into Penang, as set forth by the general statement, amounted in 1828-29 to ... Sa. Rs. 52,23,872

And the exports to	36,00,900
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The excess of imports being	Sa. Rs.	16,22,972
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Of this excess the following compose the principal items, viz.: Dhall wheat and gram, 34,620; opium, 2,08,013; oils, 93,898; Europe piece-goods, 93,080; India piece-goods, 11,26,790; rice, 3,19,395. The Dhall wheat, gram, and rice, are for the consumption of the place; the other articles compose a balance on hand.

It will be seen that of certain articles there is an excess of exports, and these are principally, beech-de-mer, 39,980; beetel nut, 38,306; birds' nests, 60,860; gold dust, 54,000; iron, 27,000; specie, 36,092; sticklac, 81,050; tin, 130,610. This probably is only the periodical adjustment, the excess being the store of the former year. Specie, pepper, nutmegs, and cloves, are not produced on the island, and from this source the excess of exports may in a small degree proceed.

The import of specie amounts to	Rs.	8,32,232
The exports being	7,19,876

The excess of import being	Rs.	1,12,356
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But as far as commercial results are concerned, we must deduct from the imports no less than 5,94,620 imported by Government: taking this from the imports, the commercial import would be sicca rupees 2,37,612, which deduct from 7,19,876, leaving excess of exports of the precious metals 4,82,264. While the imports of goods from Bengal as well as Madras so far exceed the exports, and so large a balance remains returnable in specie, the Government bills are generally the medium of adjustment. The import of specie

specie by Government arises only in some years from accidental circumstances, a public demand at times when commercial demand for bills does not exist, or the expediency of keeping up the circulation of a particular coin, the sicca rupee. There is no doubt the Government might, at a certain season, fill their treasury at a favourable rate; and this probably has not been generally done from an objection to draw at once, within a month probably, for the surplus expenditure of the whole year. It is evident that the course of trade must unavoidably lead to the exportation of the precious metals to a great extent: the only counteraction and consequent retention of the circulating medium arises from the great expenditure from the public treasury; up to this time seldom less than one lack of rupees per month thrown into the market, and the remittance by bills instead of specie, which retains so much in the place. When the projected abolition of the Government takes place, and the consequent reduction of public expenditure to a sum nearly within the regular receipts, the drawing of bills, as well as import of specie by Government will cease, and the counteracting principle being destroyed, a comparative deficiency in the circulating medium must be formed, to an extent probably to induce the same process of commercial dealings so observed at Singapore, the barter of goods against each other, instead of the more certain and substantial one of sale and purchase by the medium of actual cash. Of the statements of intermediate trade between Prince of Wales' Island, Singapore, and Malacca, little information can be added to the contents of the statements themselves; they contain merely the occasional import and export of the same articles, sent from one place to another in search of a market, according as the rise or fall of prices affords prospects of sale.

The total amount of imports into Prince of Wales' Island from					
Singapore is	...	...	...	...	Sa. Rs. 6,76,026
And from Malacca	...	...	...	...	1,12,117

Total Sa. Rs. 7,88,143

The import of specie from the former is	...	...	Sa. Rs. 1,17,522
And from the latter	...	...	1,40,595

Total Sa. Rs. 2,58,117

The exports are as follows:

To Singapore	...	...	...	Sa. Rs. 11,47,535
To Malacca	...	...	...	29,395

Total in goods	...	...	11,76,930
And in specie	...	...	29,395

The excess of the export to Singapore over the import, 4,17,509, is produced principally from the export of India piece-goods, to the amount of no less than 7,83,500, counterbalanced by import of British piece-goods, sticklac, and sundry other articles. The export and import of the same articles to and for the same places, may no doubt excite some surprise; it can be accounted for only to the anxiety of merchants to get rid of the surplus goods. This transit keeps in constant employ country vessels, to the extent of from 600 to 800 tons.

The trade of Singapore is carried on with the following places: England, Foreign Europe, South America, Mauritius, Cape of Good Hope, and New South Wales; Calcutta, Madras, Bombay, China, Java, Rio, Siam, Cochin China, Ceylon, Acheen, and North Pepper Ports; Sumatra, East Coast of Peninsula, Straits, Celebes, Borneo, Balley, Manilla, Comboya, and neighbouring islands and other native ports.

The imports of goods from England into Singapore for this year amount to sicca rupees 24,14,430, of which the principal items are, beer, 35,065; brandy and spirits, 22,740; cochineal, 5,262; copperware, 5,887; copper sheathing, 64,019; earthenware, 45,811

England, Imports from

45,811; glassware, 12,897; gold thread, 3,789; iron, 1,35,791; ironware-mongery, 16,48,859; umbrellas, 1,593; wines, 50,541; woollens, 94,301; sundries, 2,66,202.

England, Exports to
Specie in value,
Rs. 37,011

The exports to England amount to sicca rupees 66,02,716, of which the principal articles are, bees'-wax, 3,816; benjamin, 8,744; brandy and spirits, 4,319; camphor, China, 2,06,466; coffee, 5,41,123; dragon's blood, 3,435; earthenware, 10,339; gold dust, 1,263; hides, 2,589; ivory, 8,506; mother-of-pearl shell, 12,587; nankeens, 8,22,941; oil, 1,578; pepper, 2,04,595; piece-goods, India, 1,12,390; rattans, 27,009; raw silk, 32,71,565; saltpetre, 10,415; spices, 2,28,643; sugar, 4,08,894; tin, 43,431; tortoise-shell, 3,79,321; wood, sapan, 3,730; wood, bookon, 3,648; woollens, 2,105; sundries, India, 1,07,961; sundries, China, 1,69,086; sundries, Straits, 1,300; exclusive of sundry small quantities of other articles, amounting to about rupees 900.

A comparison of the trade with England shows an excess of exports amounting nearly to sicca rupees 42,98,286; of this excess the principal article is raw silk, to the extent of rupees 32,71,565; this article is imported from China, landed and re-exported only in consequence of the law preventing its being carried direct from China. A few further articles imported also from China under similar circumstances: nankeen cloths amount to 8,22,941; spices, 2,28,643; China sundries, 1,67,961. The imports and exports of specie are scarcely worth notice. The great proportion of the funds for the conduct of this trade is probably derived from the proceeds of sale in India and Straits produce carried for sale to China, by the commanders of the Honourable Company's ships, the returns being in excess to their privilege tonnage, and of necessity sent by another ship. On this trade the Singapore merchants gain only the commission of one per cent. for landing and re-shipping.

Foreign Europe,
Imports from

The imports from Foreign Europe amount to sicca rupees 86,509, of which the principal articles are, brandy, 6,946; hides, 1,999; iron, 18,229; piece-goods, 6,315; wines, 14,676; woollens, 37,039; exclusive of small articles amounting to sicca rupees 1,203.

Foreign Europe,
Exports to

The exports to Foreign Europe amount to sicca rupees 2,20,988, of which the principal articles are, camphor, China, 6,567; coffee, 9,291; nankeens, 1,010; pepper, 15,740; rattans, 2,650; raw silk, 29,891; spices, 8,826; sugar, 81,362; tea, 17,050; iron, 34,124; wood, sapan, 10,392; sundries, India, 3,504; exclusive of other small articles amounting to sicca rupees 574.

A comparison of the trade with Foreign Europe, shows an excess of exports amounting to sicca rupees 1,34,479. From what source the funds are derived that pay for the excess does not appear: the articles exported are in general China and Straits produce.

South America,
Imports from
Specie in value,
Rs. 20,260.

The amount of imports is sicca rupees 80,108, of which the principal articles are, brandy and spirits, 3,157; copper, Peruvian, 23,213; glassware, 2,484; gold dust, 3,157; iron, 19,534; ironware and mongery, 4,073; piece-goods, 1,132; wines, 4,231; sundries, 18,841; exclusive of small articles amounting to sicca rupees 252.

South America,
Exports to
Specie in value,
Rs. 21,050.

The amount of exports is sicca rupees 72,105, of which the principal articles are, bees' wax, 1,088; gunnies, 2,050; nankeens, 7,074; pepper, 5,316; piece-goods, India, 20,850; rattans, 2,294; rice, 8,657; spices, 9,927; sago, 3,691; tortoise-shell, 1,155; wheat and gram, 1,105; sundries, India, 4,527; sundries, China, 2,370; exclusive of small articles amounting to sicca rupees 1,985.

A comparison of the trade with South America shows an excess of imports amounting to nearly sicca rupees 8,008.

Mauritius, Cape of
Good Hope, and
New South Wales,
Imports from

The amount of imports from these places is sicca rupees 43,868, of which the principal articles are, beech-de mer, 17,004; ebony, 15,989; wines, 3,761; wood, sandal, 5,809; sundries, Europe, 1,134; exclusive of small articles amounting to sicca rupees 168.

Mauritius, Cape of
Good Hope, and
New South Wales,
Exports to

The amount of exports to these places is sicca rupees 34,164, of which the principal articles are, copperware, 1,684; copper sheathing, 6,315; earthenware, 1,082; pepper, 3,629; piece-goods, Europe, 2,178; rattans, 1,761; rice, 8,851; sugar candy, 1,578; tea, 1,263; wheat and gram, 2,886; exclusive of small articles amounting to sicca rupees 1,460.

A com-

A comparison of the trade of these places shows an excess in the imports of sicca rupees 9,705.

The imports from Calcutta for this year amount to sicca rupees 29,69,544, of which the principal articles are, benjamin, 6,315; cotton, 1,263; gold thread, Europe, 1,684; gunny bags, 44,179; hides, 1,202; opium, 17,75,445; piece-goods, Europe, 69,669; piece-goods, India, 7,82,260; saltpetre, 5,740; wheat and gram, 26,826; wines, 16,012; woollens, 1,86,608; sundries, Europe, 23,830; sundries, India, 27,596; exclusive of small articles amounting to sicca rupees 908.

Calcutta, Imports from.
Specie in value,
Sa. Rs. 7,512

The exports of Calcutta for this year amount to sicca rupees 22,55,476, of which the principal articles are, bees'-wax, 17,425; benjamin, 5,894; brandy and spirits, 17,229; brass-ware, 1,010; coffee, 1,069; copper, Japan, 4,81,720; copper, Peruvian, 23,997; gold dust, 5,54,480; hides, 5,999; ironware and mongery, 2,841; nankeens, 1,743; pepper, 2,06,100; piece-goods, Europe, 11,493; piece-goods, India, 1,841; rattans, 36,834; spelter, 80,011; spices, 25,582; sago, 1,806; sticklac, 3,728; tin, 5,89,507; tortoise-shell, 20,970; wines, 8,114; wood, sapan, 76,586; woollens, 19,366; sundries, Europe, 14,425; sundries, India, 40,563; sundries, Java, 1,052; exclusive of small articles amounting to sicca rupees 4,091.

Calcutta, Exports to.
Specie in value,
Sa. Rs. 1,03,418

A comparison of the trade with Calcutta shows an excess of imports, sicca rupees, 7,14,063, nearly a balance met partly by bills drawn by the resident on account of Government, a part by export of specie, sicca rupees 1,03,418.

The amount of imports from this port is sicca rupees 10,84,595, of which the following are the principal articles: cotton, 9,472; ebony, 5,473; piece-goods, India, 10,59,141; sundries, Europe, 3,789; sundries, India, 5,292; exclusive of small articles amounting to sicca rupees 1,426

Madras, Imports from.
Specie in value,
Sa. Rs. 3,683

The amount of exports to this port is sicca rupees 97,682, of which the following are the principal articles: beetel nut, 1,052; brandy and spirits, 2,620; copper, Japan, 16,800; gold dust, 2,917; iron, 3,831; ironware and mongery, 1,199; opium, 1,684; pepper, 10,386; piece-goods, Europe, 14,787; rattans, 11,676; raw silk, 7,156; tin, 2,987; wines, 1,263; sundries, Europe, 7,761; sundries, India, 6,862; sundries, China, 1,262; exclusive of small articles amounting nearly to sicca rupees 393.

Madras, Exports to.
Specie in value,
Sa. Rs. 2,95,916.

A comparison of the trade with Madras shows an excess of imports of sicca rupees 9,86,913, met in part by export of specie to the amount of 2,95,916; the balance may be accounted for by the yet unsold piece-goods, the principal articles of import. The Madras merchants, who generally return with their own goods, invariably carry away specie in return; Madras rupees if to be had, next dollars, and last sicca rupees.

The amount of imports from Bombay is sicca rupees 3,80,144, of which the principal articles are, cotton, 14,781; opium, Malwa, 1,92,081; pepper, 14,053; piece-goods, Europe, 52,644; piece-goods, India, 72,864; spices, 3,098; sundries, India, 30,676; exclusive of small articles amounting to sicca rupees 942.

Bombay, Imports from.
Specie in value,
Sa. Rs. 2,103.

The amount of exports from Singapore to Bombay is sicca rupees 2,91,659, of which the principal articles are, benjamin, 5,153; brandy and spirits, 26,929; camphor, China, 3,725; ditto, Malay, 31,869; copper, Japan, 35,195; gold dust, 28,701; iron, 2,105; opium, 4,125; pepper, 2,039; piece-goods, Europe, 1,157; piece-goods, India, 3,178; spelter, 6,422; spices, 5,601; sticklac, 10,893; sugar, 33,143; tin, 48,624; wines, 1,494; wood, sapan, 18,372; sundries, Europe, 1,549; sundries, China, 17,757; exclusive of small articles amounting nearly to sicca rupees 5,106.

Bombay, Exports to.
Specie in value,
Sa. Rs. 61,377.

A comparison of the trade with Bombay shows an excess of imports amounting nearly to sicca rupees 88,485.

The amount of imports from China is sicca rupees 55,90,823, of which the principal articles are, benjamin, 2,105; brassware, 5,231; camphor, China, 2,52,593; dragon's blood, 2,020; earthenware, 1,06,414; ironware and mongery, 2,568; joss paper and sticks, 23,148; nankeens, 8,82,971; piece-goods, India, 1,17,810; raw silk, 34,96,701; spices, 3,39,206.

China, Imports from.
Specie in value,
Sa. Rs. 31,311

3,39,206; sugar candy, 8,672; tea, 5,106; tobacco, 27,720; tortoise-shell, 3,732; umbrellas, 8,861; sundries, India, 5,828; sundries, China, 2,99,408.

China, Exports to
Specie in value,
Sa Rs. 52,477.

The amount of exports to China is sicca rupees 17,60,251, of which the principal articles are, beech-de-mer, 1,01,517; beetle nut, 2,420; birds' nests, 1,81,598; camphor, Malay, 79,221; cochineal, 5 262; cotton, 9,990; ebony, 84,498; gold dust, 12,630; hides, 2,977; iron, 2,631; ivory, 3,999; opium, 6,24,862; pepper, 76,571; piece-goods, Europe, 41,655; rattans, 1,48,820; rice, 2,357; saltpetre, 5,430; sea weed, 20,746; spices, 1,157; sago, 4,986; tin, 1,11,411; tortoise-shell, 36,267; wares, 2,420; wood, jarroo, 5,287; wood, sapan, 4,597; wood, sandal, 4,403; wood, sakkah, 5,578; wood, canangee, 5,052; woollens, 58,177; sundries, Europe, 71,483; sundries, India, 31,263; sundries, Straits, 6,666.

A comparison of the trade with China shows an excess in the imports of nearly 38,30,572 rupees. The excess of imports finds its way to England as explained above.

Java, Imports from.
Specie in value,
Sa Rs. 2,91,207

The imports from Java amount to sicca rupees 11,51,933, of which the principal articles, are, beech-de-mer, 10,360; birds' nests, 16,840; brandy and spirits, 51,901; brassware, 11,221; coffee, 2,10,228; copper, Japan, 2,81,575; glassware, 1,599; nankeens, 2,037; oil, 2,856; pepper, 30,442; piece-goods, Europe, 11,981; piece-goods, India, 7,138; piece-goods, Malay, 65,953; rattans, 25,674; rice, 1,51,958; salt, 11,152; spices, 36,833; sugar, 1,153; tin, 35,237; tobacco, 1,08,389; tortoise-shell, 4,210; wheat and gram, 1,162; wines, 14,387; sundries, Europe, 9,049; sundries, India, 16,039; sundries, Java, 28,977.

Java, Exports to
Specie in value,
Sa Rs. 51,157.

The exports to Java amount to sicca rupees 9,83,440, of which the principal articles are, bees'-wax, 22,188; beer, 3,818; benjamin, 1,216; copper sheathing, 3,797; earthenware, 30,628; iron, 5,919; ironware and mongery, 7,209; joss paper and sticks, 1,886; nankeens, 15,309; oil, 3,978; opium, 3,03,695; piece-goods, Europe, 47,840; piece-goods, India, 3,31,403; piece-goods, Malay, 8,540; raw silk, 16,014; spelter, 2,926; sticklac, 12,684; sugar, 42,977; tea, 7,310; umbrellas, 2,477; wheat and gram, 8,268; wines, 2,147; sundries, Europe, 8,109; sundries, India, 45,953; sundries, China, 6,429; sundries, Straits, 6,080.

A comparison of the trade with Java shows an excess of imports of sicca rupees 1,71,493.

Rhio, Imports from.
Specie in value,
Sa Rs. 13,194.

The amount of imports is sicca rupees 1,80,009, of which the principal articles are, beech-de-mer, 3,268; coffee, 9,283; opium, 1,631; pepper, 57,575; piece-goods, Malay, 1,064; rattans, 4,551; rice, 5,312; salt, 1,744; sea-weed, 4,731; sticklac, 1,578; tin, 5 525; tobacco, 10,640; wood, sapan, 18,618; sundries, Europe, 1,263; sundries, India, 47,539; exclusive of small articles amounting to nearly sicca rupees, 2,650.

Rhio, Exports to.
Specie in value,
Sa Rs. 41,135.

The amount of exports is sicca rupees 1,55,084, of which the principal articles are, copper sheathing, 2,227; earthenware, 3,193; iron, 1,936; nankeens, 1,494; opium, 1,254; piece-goods, Europe, 5,003; piece goods, India, 50,391; piece-goods, Malay, 1,233; raw silk, 1,768; rice, 58,835; sago, 1,434; sticklac, 1,056; tobacco, 1,063; woollens, 6,163; sundries, India, 5,527; sundries, China, 1,743; sundries, Straits, 1,845.

A comparison of the trade with Rhio shows an excess in the imports of nearly sicca rupees 24,925.

Sum, Imports from.
Specie in value,
Sa Rs. 21,192.

The amount of imports is sicca rupees 7,71,057, of which the principal articles are, brandy and spirits, 1,834; earthenware, 6,746; ironware and mongery, 14,741; ivory, 4,946; joss paper and sticks, 2,505; nankeens, 22,355; oil, 21,298; pepper, 3,641; piece-goods, Europe, 8,430; piece-goods, India, 4,536; rice, 79,095; salt, 42,967; sticklac, 74,748; sugar, 8,420; sugar candy, 1,805; tin, 19,323; tobacco, 8,493; wood, sapan, 72,633; woollens, 3,262; sundries, India, 22,687; exclusive of small articles amounting nearly to sicca rupees 2,380.

Sum, Exports to
Specie in value,
Sa Rs. 36,942

The amount of exports is sicca rupees 6,03,246, of which the principal articles are bees'-wax, 5,633; camphor, Malay, 3,725; copper sheathing, 3,447; earthenware, 3,578; glassware, 13,081; gold dust, 9,767; opium, 1,14,201; pepper, 1,263; piece-goods, Europe, 1,81,729;

1,81,729; piece-goods, India, 1,86,274; rattans, 22,160; raw silk, 2,904; spelter, 2,105; sago, 1,317; woollens, 8,756; sundries, Europe, 26,170; sundries, India, 13,708.

A comparison of the trade with Siam shows an excess of imports of nearly sicca rupees 1,67,611.

The amount of imports is sicca rupees 2,31,184, of which the principal articles are, oil, 2,518; opium, 2,210; piece-goods, India, 1,526; piece-goods, Malay, 2,797; raw silk, 1,715; rice, 1,51,191; salt, 24,195; sticklac, 6,904; sugar, 81,561; tobacco, 1,359; sundries, India, 19,422; sundries, China, 2,547; exclusive of small articles amounting to sicca rupees 3,290.

Cochin China,
Imports from
Specie in value,
Sa. Rs. 263.

The amount of exports is sicca rupees 1,06,252, of which the principal articles are, opium, 91,081; piece-goods, Europe, 1,269; rattans, 3,056; wood, sapan, 1,157; sundries, Europe, 2,757; sundries, India, 3,324; sundries, Straits, 1,368; exclusive of small articles amounting to sicca rupees 2,235.

Cochin China,
Exports to
Specie in value,
Sa. Rs. 1,659.

A comparison of the trade with Cochin China shows an excess of imports of nearly sicca rupees 1,21,932.

The amount of imports is sicca rupees 23,002, of which the principal articles are, brandy and spirits, 15,078; ebony, 7,578; sundries, Europe, 168; sundries, India, 5,178.

Ceylon, Imports from

The amount of exports is sicca rupees 2,315, consisting of sundry small articles, nankeens, spelter, and Europe sundries.

Ceylon, Exports to.

A comparison of the trade with Ceylon shows an excess in the imports of nearly sicca rupees 25,687.

The only import from these places is specie to the amount of sicca rupees 8,420.

The amount of exports is sicca rupees 45,815, of which the principal articles are, copper, Japan, 1,389; earthenware, 12,731; opium, 3,157; piece-goods, Europe, 5,978; piece-goods, India, 10,104; sticklac, 3,957; woollens, 3,157; sundries, India, 1,115; sundries, China, 1,052; exclusive of small articles amounting to sicca rupees 3,060.

Acheen and other
Northern Pepper
Ports, Imports from
and Exports to.
Specie in value,
Sa. Rs. 105.

The amount of imports is sicca rupees 4,39,238, of which the principal articles are, bees'-wax, 13,281; benjamin, 1,738; betel nut, 6,341; brandy and spirits, 1,814; coffee, 1,20,626; copper, Japan, 2,273; dragon's blood, 2,164; gold dust, 17,861; ivory, 2,204; opium, 2,105; pepper, 37,934; piece-goods, India, 7,788; rattans, 69,246; rice, 29,587; sago, 10,069; salt, 4,584; spices, 15,590; tin, 46,143; tobacco, 5,332; sundries, Europe, 7,883; sundries, India, 14,443; sundries, Java, 11,923.

Other Ports on
Sumatra, Imports
from.
Specie in value,
Sa. Rs. 86,559.

The amount of exports is sicca rupees 3,77,709, of which the principal articles are, copper sheathing, 2,947; cotton, 14,718; earthenware, 5,091; iron, 6,392; ironware and mongery, 1,206; oil, 1,039; opium, 10,072; piece-goods, Europe, 33,745; piece-goods, India, 1,93,771; piece-goods, Malay, 15,504; raw silk, 8,687; rice, 2,127; salt, 31,653; sticklac, 13,688; tin, 1,162; tobacco, 8,072; sundries, Europe, 13,718; sundries, India, 4,214; sundries, Straits, 1,087; exclusive of small articles amounting nearly to sicca rupees 9,690.

Other Ports on
Sumatra, Exports to.
Specie in value,
Sa. Rs. 50,576.

A comparison of the trade with Sumatra shows an excess of imports of sicca rupees 61,529 nearly.

The imports amount to sicca rupees 6,53,032, of which the principal articles are, gold dust, 2,12,443; nankeens, 8,630; opium, 9,809; pepper, 1,05,015; piece-goods, Europe, 1,315; piece-goods, India, 1,947; piece-goods, Malay, 2,050; rattans, 2,810; rice, 1,042; salt, 8,915; sticklac, 7,329; sugar, 7,809; tin, 2,79,193; tortoise-shell, 1,199; sundries, India, 4,068; exclusive of small articles amounting nearly to sicca rupees 3,430.

East Coast of the
Peninsula, Imports
from.
Specie in value,
Sa. Rs. 3,598.

The exports amount to sicca rupees 5,93,428, of which the particular articles are, beech-

East Coast of the
Peninsula Exports

India, 6,453; exclusive of small articles amounting nearly to sicca rupees 4,270.

A comparison of the trade with the east coast of the Peninsula, shows an excess on imports of about sicca rupees 59,609.

Straits, Imports from.
Specie in value,
Sa. Rs. 1,873.

The imports amount to sicca rupees 1,89,120, of which the principal articles are, ebony, 1,391; rattans, 2,373; sago, 1,079; tin, 1,74,033; sundries, Straits, 8,522; exclusive of small articles amounting nearly to sicca rupees 1,700.

Straits, Exports to
Specie in value,
Sa. Rs. 70,525

The exports amount to sicca rupees 72,316, of which the principal articles are, nankeens, 1,012; opium, 15,221; piece-goods, Europe, 1,461; piece-goods, India, 9,057; piece-goods, Malay, 20,592; rice, 5,381; salt, 2,897; tobacco, 11,676; exclusive of small articles amounting nearly to about sicca rupees 5,020.

A comparison of the Straits' trade shows an excess in the imports of sicca rupees 1,16,804.

Celebes, Imports from.
Specie in value,
Sa. Rs. 65,928.

The amount of imports is sicca rupees 4,02,157, of which the principal articles are, beech-de-mer, 15,835; bees'-wax, 3,717; birds'-nests, 26,356; coffee, 7,579; ebony, 1,098; gold dust, 4,262; iron, 10,681; mother-of-pearl shell, 1,708; oil, 1,857; piece-goods, Malay, 1,42,145 rattans, 3,176; rice, 5,351; spices, 3,589; tobacco, 1,114; tortoise-shell, 1,69,241; sundries, 2,170.

Celebes, Exports to.
Specie in value,
Sa. Rs. 15,577.

The exports amount to sicca rupees 5,03,248, of which the principal articles are, earthenware, 1,050; gold dust, 1,263; iron, 6,993; ironware and mongery, 4,143; opium, 1,89,692; piece-goods, Europe, 61,618; piece-goods, India, 1,37,811; piece-goods, Malay, 1,599; raw silk, 44,357; sticklacc, 4,328; tobacco, 1,723; woollens, 14,168; sundries, Europe, 6,231; sundries, India, 19,971; sundries, Straits, 6,166; exclusive of small articles amounting nearly to sicca rupees, 2,119.

A comparison of the trade with the Celebes shows an excess in the exports of sicca rupees 1,01,091.

Borneo, Imports from.
Specie in value,
Sa. Rs. 27,565

The imports amount to sicca rupees 4,28,722, of which the principal articles are, anti-mony oil, 1,416; beech-de-mer, 4,163; bees'-wax, 18,345; birds'-nests, 63,347; brassware, 3,111; camphor, Malay, 33,787; ebony, 1,357; gold dust, 1,00,519; opium, 2,947; pepper, 32,148; piece-goods, Malay, 3,767; rattans, 93,301; rice, 4,665; sago, 3,420; tortoise-shell, 27,280; wood, garroo, 8,020; sundries, India, 20,945.

Borneo, Exports to
Specie in value,
Sa. Rs. 22,553

The amount of exports is sicca rupees 3,46,122, of which the principal articles are, brassware, 4,658; earthenware, 1,330; iron, 15,189; ironware and mongery, 2,577; joss paper and sticks, 1,307; nankeens, 19,125; opium, 22,758; piece-goods, Europe, 8,100; piece-goods, India, 2,30,024; piece-goods, Malay, 8,385; raw silk, 9,645; suet, 1,684; sticklacc, 1,187; tea, 1,081; tobacco, 5,092; sundries, Europe, 2,568; sundries, India, 7,805; exclusive of small articles amounting nearly to rupees, 2,820.

A comparison of the trade with Borneo exhibits an excess of imports amounting to sicca rupees 78,600.

Bally, Imports from.
Specie in value,
Sa. Rs. 45,110.

The amount of imports is sicca rupees 75,279, of which the particular articles are, bees'-wax, 2,841; birds'-nests, 6,555; ebony, 1,435; piece-goods, Malay, 16,911; rice, 19,232; tobacco, 2,096; tortoise-shell, 21,035; sundries, India, 1,589; exclusive of small articles amounting nearly to sicca rupees 4,878.

Bally, Exports to
Specie in value,
Sa. Rs. 969

The exports amount to sicca rupees 1,79,568, of which the principal articles are, iron, 2,125; ironware and mongery, 1,368; opium, 139,217; piece-goods, Europe, 4,759; piece-goods, India, 10,612; raw silk, 1,599; woollens, 1,172; sundries, India, 4,144; sundries, China, 1,344; sundries, Straits, 1,171; exclusive of small articles amounting nearly to sicca rupees 2,360.

A comparison of the trade with Bally exhibits an excess of exports amounting to sicca rupees 1,04,289.

Manilla, Imports from.
Specie in value,
Sa. Rs. 39,026

The amount of imports is sicca rupees 2,21,546, of which the principal articles are, coffee, 1,173; copper sheathing, 5,958; hides, 1,330; mother-of-pearl shell, 8,510; oil, 3,144; piece-

piece-goods, Europe, 83,928; rice, 1,063; spices, 6,315; sugar, 69,846; tea, 1,578; wood, Japan, 16,686; sundries, India, 68,396.

The amount of exports is sicca rupees 3,10,891, of which the principal articles are, bees'-wax, 18,077; beetel-nut, 5,262; earthenware, 23,874; glassware, 4,294; iron, 9,897; opium, 3,704; pepper, 25,965; piece-goods, Europe, 1,33,943; piece-goods, India, 32,059; rattans 12,617; sago, 4,435; woollens, 14,130; sundries, Europe, 14,307; sundries, India, 6,544; sundries, China, 1,553; exclusive of small articles amounting to sicca rupees 260 nearly.

A comparison of the trade with Manilla exhibits an excess of exports, amounting to sicca rupees 89,345.

The imports from Comboja amount to sicca rupees 8,051, of which the principal articles are, piece-goods, Malay, 1,684; rice, 1,431; tobacco, 1,578; exclusive of small articles, making up the above amount.

None. Excess of imports, sicca rupees 8,051.

The amount of imports is sicca rupees 2,12,614, of which the principal articles are, beech-de-mer, 9,653; bees'-wax, 4,616; birds' nests, 1,210; brandy and spirits, 21,165; coffee, 3,921; oil, 5,486; pepper, 18,477; piece-goods, Malay, 8,978; rattans, 12,998; rice, 1,597; sago, 2,061; sea-weed, 10,378; tin, 67,208; tobacco, 7,176; tortoise-shell; 23,976; sundries, 10,262.

The amount of exports is sicca rupees 2,11,625, of which the principal articles are, earthenware, 4,394; iron, 2,119; ironware and mongery, 4,083; ivory, 1,052; nankeens, 3,510; oil, 1,895; opium, 61,658; piece-goods, Europe, 8,626; piece-goods, India, 51,963; piece-goods, Malay, 9,432; raw silk, 7,708; rice, 15,263; salt, 8,978; sago, 1,180; sticklac, 1,173; sugar, 4,277; sugar-candy, 3,410; tobacco, 3,532; wood, garroo, 4,736; wood, sapan, 2,947; woollens, 3,307; sundries, Europe, 1,254; sundries, India, 3,531; sundries, Straits, 1,185.

A comparison of the trade with the neighbouring islands and native ports exhibits an excess of imports amounting nearly to sicca rupees 989.

From the foregoing it appears, as detailed in the general statement, that the total imports into Singapore in goods, during the official year 1828-29, amounted to :

						Sa. Rs. 1,76,40,969½
And the exports to	...	...	...	...	...	1,58,25,997½
The excess of imports being	...	...	...	...	Sa. Rs.	18,14,971½

Of this excess, the following compose the principal items, viz.: brandy and other spirits, 73,313; copper sheathing, 50,923; earthenware, 60,252; iron, 1,17,172; British piece-goods, 12,40,821; India piece-goods, 6,15,871; Malay piece-goods, 1,61,933; rice, 3,25,741; spices, 1,23,368; tobacco, 82,244; wines, 88,006; woollens, 1,51,899; sundries, Europe, 1,76,461; sundries, China, 1,13,669.

The above may be considered as the balance of the respective articles remaining in store, the rice being probably reserved for consumption. Of certain articles there appears an excess in the year, as follows: beech-de-mer, 42,516½; bees'-wax, 28,085½; birds' nests, 64,240½; cane, 80,050½; coffee, 1,97,579½; copper, Japan, 2,51,256½; ebony, 49,289; gold dust, 2,72,972½; pepper, 2,51,238½; rattans, 53,839; sugar, 22,512½; sugar, 1,30,357½; tin, 2,02,231½; tortoise-shell, 1,86,411½; sundries, India, 35,477½; and the excess of export within the year is the periodical adjustment from year to year; for it is always to be held in mind, that these settlements have no produce of their own, and the trade consists entirely of importation and re-exportation.

The imports of specie being	...	...	...	...	Sa. Rs.	7,08,993
The exports of specie being	...	...	...	...	...	10,42,337
The excess of exports is	...	...	...	...	Sa. Rs.	3,33,344

Manilla, Exports to.
Specie in value,
Sa. Rs. 30,093.

Comboja, Imports
from

Comboja, Exports to.

Neighbouring Islands
and other Native
Ports, Imports from.
Specie in value,
Sa. Rs. 16,976

Neighbouring Islands
and other Native
Ports, Exports to
Specie in value,
Sa. Rs. 46,826

APPENDIX,
No. 17.
continued.

(Enclosure No 1.)
State of the Trade
of Prince of Wales'
Island

In considering the extent of the trade at Singapore, rated not in goods but in money, some reference must be had to the peculiar method in which all commercial dealings are there conducted. The unceasing drain of specie leaves not any scarcely in the place: specie, therefore, never enters into any common transaction. All goods are disposed of on credit generally for two months, and to intermediate native Chinese merchants, and those at the expiration of the period deliver in return, not money, but articles of Straits produce, adapted to the return cargo: the value on both sides of the transaction is rated from twenty five to thirty per cent. beyond the sum that would be paid in ready cash. And as the price-current from which the statement is rated is the barter, and not the ready money price, the real value of the trade may be computed thirty per cent. under the amount stated. In what manner the consignee of the distant constituent states his account sales it is not for us to say; but if stated at barter prices without explanation, he must be considerably misled, and imagine a much more favourable sale than actually takes place. In reality, he can only know the actual out-turn of his adventure when the return goods are sold, and the sale price in England of the India cargo compared with the prime cost of the outward one. If, indeed, there be any truth in price-currents, the profits after all must be very inconsiderable, as will appear by comparison of the Indian with the Europe price of the homeward cargo; the home price of the outward one we have no means of calculating; but the main item being piece-goods, considering the immense stock unsold, we must conclude the sale price cannot afford much profit. Of the statement professing to show the intermediate trade between Singapore and Prince of Wales' Island, it is useless to make any further remark, than to point out the obvious discrepancy between it and the one made out at the latter. If both were correct, the imports from one should be the exports to the other, with the difference only of the goods in transitu at the date of the statement; but the exports from Prince of Wales' Island to Singapore are stated at sicca rupees 11,47,535, while the imports admitted in the statement amount to 8,16,526. The exports to Penang, in the Singapore statement, are put down 4,78,154; the imports admitted at Penang are 6,76,026; as far as general results are concerned, those statements are not important, the whole material of the intermediate trade consisting of the external imports, and the interchange between the one and the other to find a market.

Malacca Trade

The trade of Malacca must of course be inconsiderable; situated between two places of depôt, one at the north-west and the other at the south-east end of the Straits, its trade is confined to its own consumption and produce. Malacca in former times under the Dutch Government, and before the existence of Penang and Singapore, was the grand emporium at which was carried on the trade now conducted at the two. To counteract the commercial influence and monopolizing spirit of the Dutch rulers of the day, Penang was established in 1786, and in due time drew to it a great portion of the entrepôt trade of the Straits: the restoration of Java and of Malacca at the conclusion of the war rendered the establishment of a southern depôt most expedient. Singapore was selected, and was, after some political discussion, confirmed to the British Government; more conveniently situated, it has annihilated the trade of Malacca, and certainly already much reduced, and bids fair to annihilate that of Penang also.

The trade of Malacca is carried on with the following places: Calcutta, Madras, Bombay, England, China, Java, Ceylon, Siam, Coast of Tenasserim, Acheen, Delhi, Quedah, and other native ports.

Calcutta. Imports
from

The amount of imports is sicca rupees 1,12,565, of which the principal articles are, wheat and gram, 5,945; gunnies, 2,852; opium, 89,240; piece-goods, India, 5,553; rice, 6,329; India sundries, 2,492; exclusive of small articles amounting to about rupees 130.

Calcutta. Exports to

The amount of exports is sicca rupees 17,830, of which the principal articles are, pepper, 3,721; spelter, 9,478; tin, 2,781; India sundries, 1,370; exclusive of small articles amounting nearly to sicca rupees 484.

A comparison of the trade with Calcutta exhibits an excess of imports of nearly sicca rupees 94,735.

The amount of imports is sicca rupees 2,43,178, of which the principal articles are, piece-goods, India, 2,38,293; India sundries, 4,858; exclusive of small articles about 25 rupees. Madras, Imports from.

The amount of exports is sicca rupees 53,573, consisting of gold dust, 22,000. Madras Exports to.
Specie in value,
Ru. Rs. 31,573.

A comparison of the trade with Madras exhibits an excess of imports amounting to nearly sicca rupees 1,89,605.

The imports consist of sundry small articles amounting to sicca rupees 1,349. Bombay, Imports from.

The exports amount to sicca rupees 1,799, of which the principal article is, rattans, 1,799; exclusive of small articles, amounting to about sicca rupees 768. Bombay, Exports to.
Specie in value,
Ru. Rs. 7,367.

A comparison of the late trade with Bombay exhibits an excess in the exports of about sicca rupees 4,501.

The imports amount to sicca rupees 1,01,664, of which the principal articles are, iron, 10,804; piece-goods, British, 59,350; spelter, 9,472; spirits, 4,317; wines, 4,598; Europe sundries, 8,032; exclusive of small articles amounting to nearly sicca rupees 1,177. England, Imports from

There are none. England, Exports to

N.B. A comparison of the trade as per statement, exhibits a total excess of imports of 1,04,664; but on adding up the different items, they amount only to sicca rupees 97,754, to which add dollars 1,400, or sicca rupees 2,947, making a total of sicca rupees 1,00,701; difference, sicca rupees 3,910.

The amount of imports from China is sicca rupees 32,240, of which the principal articles are, piece-goods, India, 2,900; raw silk, 8,235; tea, 2,200; tobacco, 6,040; China sundries, 11,170; exclusive of small articles amounting nearly to sicca rupees 1,600. China, Imports from.
Specie in value,
Ru. Rs. 2,340

The amount of exports is sicca rupees 64,550, of which the principal articles are, beetel nut, 1,040; birds' nests, 16,500; ebony, 1,050; gold dust, 2,200; pepper, 6,850; rattans, 21,600; tin, 8,780; India sundries, 6,520; ivory, 8. China, Exports to.

A comparison of the trade with China exhibits an excess in the exports amounting to sicca rupees 32,310.

The amount of imports from Java is sicca rupees 11,710, of which the principal articles are, oil, 3,400; piece-goods, India, 24,420; rice, 65,330; salt, 1,925; spirits, 6,330; tobacco, 23,355; Java sundries, 8,195; exclusive of small articles amounting to nearly sicca rupees 2,045. Java, Imports from
Specie in value,
Ru. Rs. 4,210.

The amount of exports to Java is sicca rupees 63,000, of which the principal articles are, bees'-wax, 2,590; iron, 1,495; piece-goods, India, 38,160; piece-goods, British, 6,250; raw silk, 1,265; India sundries, 13,000; exclusive of small articles, about sicca rupees 240. Java, Exports to.
Specie in value,
Ru. Rs. 23,575.

A comparison of the trade with Java exhibits an excess of imports amounting to sicca rupees 51,290.

The only trade with Ceylon is an import of spirits, amounting to sicca rupees 6,690. Ceylon.

The only trade with Siam consists of the following import of articles: oil, 11,035; paddy, 2,725; rice, 76,685; salt, 25,680; sticklac, 2,460; sugar, 11,035; tobacco, 1,500; Siam sundries, 8,500; exclusive of small articles amounting to about 200 rupees. Siam.

No trade. Coast of Tenasserim

The amount of imports is sicca rupees 21,510, the principal articles of which are, beetel nut, 1,040; piece-goods, India, 2,925; rice, 16,910; exclusive of sundry small articles amounting nearly to sicca rupees 635. Acheen, Imports from.

N. B.—By the statement, the total imports is made rupees 20,510, but the addition of the item gives 21,500; difference, less 1,000 rupees.

The

Acheen, Exports to.

The amount of exports is sicca rupees 14,945, of which the principal articles are, opium, 10,270; piece-goods, India, 3,500; exclusive of small articles amounting nearly to rupees 1,175.

A comparison of the trade with Acheen exhibits an excess in the imports of sicca rupees 6,660, taking the total as per correct addition, not the statement.

Delhi, Imports from

The amount of imports from Delhi is sicca rupees 16,116; the principal articles are pepper, 16,044; bees'-wax, 72.

Delhi, Exports to
Specie in value,
Sa Rs. 21,050.

The amount of exports is sicca rupees 9,610, of which the principal articles are, gold dust, 2,100; piece-goods, India, 3,725; salt, 2,440; exclusive of small articles amounting to sicca rupees 1,345.

A comparison of the trade with Delhi exhibits an excess in the imports of sicca rupees 6,506.

Quedah

The only trade with Quedah is an import of rice amounting to sicca rupees 6,950.

Other Native Ports,
Imports from.
Specie in value,
Sa Rs. 4,15,163

The amount of imports is sicca rupees 2,98,591 nearly, of which the principal articles are, bees'-wax, 4,100; birds' nests, 23,275; dammer, 1,090; gold dust, 6,240; paddy, 1,940; piece-goods, India, 79,410; rattans, 32,575; rice, 2,240; sago, 3,410; tin, 73,375; tortoise-shell, 1,476; India sundries, 29,646; Straits' sundries, 3,510; exclusive of small articles amounting to nearly sicca rupees 1,300.

Other Native Ports,
Exports to

The exports amount to sicca rupees 4,71,346, of which the principal articles are, beetel nut, 2,195; bees'-wax, 2,770; dammer, 1,110; dhol wheat and grain, 1,350; ebony, 1,340; gunnies, 2,715; iron, 3,785; ivory, 1,165; opium, 60,810; pepper, 36,050; piece-goods, India, 1,46,170; piece-goods, British, 21,430; rattans, 9,070; raw silk, 7,830; rice, 14,260; salt, 6,140; spices, 1,210; sticklac, 1,880; sugar, 4,735; tin, 78,125; tobacco, 24,675; tortoise-shell, 1,580; wine, 2,850; Europe sundries, 1,835; India sundries, 35,130; exclusive of sundry small articles amounting to sicca rupees 6,390.

A comparison of the trade with other native ports exhibits an excess in the exports of nearly sicca rupees 172,755.

The total imports in goods in Malacca being	...	Sa. Rs.	10,81,782
And the exports	... ..	...	6,72,211

Excess of imports is Sa. Rs. 4,09,571

of which the following are the principal items: beer, 2,990; birds' nests, 6,373; brandy and spirits, 16,526; dhol wheat and grain, 5,215; iron, 5,503; oil, 14,113; opium, 18,159; paddy, 5,223; piece-goods, Europe, 31,149; piece-goods, India, 1,62,118; rice, 1,60,050; * sago, 2,989; salt, 18,920; sugar, 8,069; tea, 2,002; tobacco, 6,217; wines, 1,748; sundries, Europe, 6,196; sundries, China, 9,576; sundries, Java, 7,488; sundries, Straits, 3,510; sundries, Siam, 8,063. Most of these articles are for the consumption of the place, and the interior dependency, Nanning. The aggregate population exceeds 32,000; but there is also an excess of exports of certain articles, the principal being as follows: bees'-wax, 1,031; beetel nut, 2,196; ebony, 2,671; gold dust, 20,059; pepper, 30,583; tin, 17,165; sundries, India, 18,892: of these the bees'-wax, ebony, gold dust, pepper, and tin are probably the produce of Malacca.

The import of specie amounts to sicca rupees 4,19,717, the exports to 2,65,239, the excess of imports being 1,94,478; but of this the sicca and Madras rupees, as well as copper cash piece were imported on account of Government to the extent of sicca rupees 1,70,000. It is here to be noted, that the statements of this settlement are so extremely erroneous and defective, and so carelessly drawn up, that little reliance can be placed on them.

Having now gone through the statements of trade at each settlement, I now proceed to remark

* The extension of the cultivation now in progress will soon probably render this import unnecessary.

remark on the general statement of trade at the whole three. From the statement, it appears that the import of goods at the whole four places beyond their limits, amounted, in the year 1828-29, to Sa. Rs. 2,39,47,623

And the exports to 2,00,99,109

The excess of imports being 38,48,514

The import of specie amounted to Sa. Rs. 20,00,940

And the exports to 20,27,452

The excess of export being Sa. Rs. 26,512

but of the import of specie not less than sicca rupees 5,94,620 being imported by Government, the real commercial excess of exports must be taken at 4,21,130.

Of the excess of import of goods, 38,48,513, two articles make up

no less than Sa. Rs. 32,78,829

Viz. British piece-goods 13,74,050

India 19,04,775

32,78,825

The total imports of British piece-goods during the year

amount to 20,92,894

The exports to 7,18,844

Sa. Rs. 13,74,050

The excess of import being very near equivalent to two years' export at the rate of the year.

The total import of Indian piece-goods amounted to no less than 41,95,947½ *

The exports to 22,91,168

Sa. Rs. 19,04,779½

The imports of India piece-goods are therefore double those of British, and the exports threefold. It may not be improper to make a few retrospective remarks on the state of those rival manufactures. The following is the Table of comparative Import and Export of those articles for four years.

	British Piece-Goods.		India Piece-Goods.	
	Import.	Export	Import.	Export.
Year 1825-26	13,18,759	7,87,742	17,22,487	17,44,878
— 1826-27	13,38,769	9,64,583	20,22,266	18,22,383
— 1827-28	15,29,658	9,96,380	40,96,829	34,48,995
— 1828-29	20,33,544	6,90,643	38,41,872	20,99,310
	67,20,730	34,39,348	1,16,83,353	91,15,566
	34,39,348		91,15,566	
Excess	32,81,382	Excess ..	25,67,787	

* Of this, about 3,12,936 are of Eastern manufacture.

APPENDIX,
No. 17.
continued

(Enclosure No. 1)

Minute of
R. Fullerton, Esq.
29th April 1830.

The above statement is made exclusive of Malacca, the state of the records there not admitting of comparison. From this it would appear that the imports of British piece-goods for the four years at Prince of Wales' Island and Singapore amount to 67,20,730, the exports to 34,39,348, leaving an excess of import of 32,81,382, which at the rate of annual export is nearly four years' supply, and it is known that a very heavy balance remained in 1824-25. The imports of India piece goods amount to 91,15,566, leaving an excess of 25,67,787, not much more at the average rate than one year's supply; and the statement in respect to the state of British piece-goods accords with the general opinion. I have myself heard expressed by the merchants, that goods more than equal to three years' demand have long been on hand: should the imports continue, and they seem rather to be on the increase than diminution, a heavy loss to the importers must ere long unavoidably ensue.

These Eastern countries originally drew their supplies of piece-goods entirely from the continent of India, principally the coast of Coromandel, and the place of import was Penang. The vast import of British piece-goods into the Straits, that followed the establishment of the new emporium of Singapore, intertered considerably with this trade, and we find the import and export for some years very materially reduced: the beauty of the colours and general appearance, added to their extreme cheapness, gave for a time a decided preference to British piece-goods; but the British manufacturers appear to have adhered to a principle diametrically opposite to that which used formerly to regulate the provision of goods in India, more particularly the Company's investment; standard quality, dimensions, and strength of fabric were then the main considerations, whereas cheapness seems now to be the only object attended to. The inferiority in the fabric and the flimsy texture, which scarcely bears washing, has now been discovered, and appears to have entirely destroyed that preference for British piece-goods. If we look at the exports of piece-goods to the native ports and islands, we shall scarcely find that a single piece of British manufacture has gone there of late; the export invariably consists of India piece-goods. To Siam and to Manilla the British seem still to be sent, to the latter only in greater proportion; but a ship went this year to Siam direct from the coast, and sold their cargo to great advantage; and some of the Madras merchants have found their way to Manilla also. There are many circumstances peculiarly favourable to this trade: the proximity of the place of manufacture to the place of sale admits of better means of adapting supply to demand than can exist where more than a year must elapse before the state of the market can be known; the native merchants of the coast of Coromandel are moreover their own agents, they come regularly with their goods by the Indiamen, and either return in January with the proceeds (invariably in specie, dollars or rupees), or leave some of their relations to sell during the year. The commercial factories of the Honourable Company on the coast have been gradually discontinued, and with the cessation of the trade, the price both of labour and material must have very considerably fallen; there seems, therefore, every prospect (unless the manufacturers of Great Britain attend more to the fabric and durability) of their goods being entirely excluded from use in these Eastern regions, by the more substantial manufacturers of the continent of India.

It is impossible to conclude this Report without referring to the great advantage which India derives from these settlements.* It appears that of the article of opium, from the sale of which so much revenue is derived at Bengal, there has been here imported for sale in these settlements a quantity not less in value than 28,24,864 rupees; of

* Stated in the Report at 31,25,471, but of these 3,12,936 are of Java and Malay piece-goods.

At Penang	Rs. 14,44,000
Singapore	10,59,141
Malacca	2,38,893
	<hr/> Rs. 27,41,434

of piece-goods to an aggregate amount not less than 38,83,011, of the latter not less than 27,41,334 from the coast of Coromandel. If the customs and duties, land and sea, on export of the articles remain as fixed in 1812, an aggregate at eight per cent, the duties amount to 2,19,306, and if to this be added the revenue resulting from the sale of opium, the duty on goods imported, and the benefit of so great an import of the precious metals into India, the gain to India is surely equivalent to the expense of troops for defence, which I have on another occasion remarked should not be set exclusively against these settlements, from which other Presidencies derive so great an advantage, so long at least as no duty is here charged for the use of the dépôt and the protection afforded to the passing trade.

In writing this voluminous report, I have had two objects in view; the first, to convey such information on the subject as the very imperfect documents and information admitted; secondly, to serve in some degree as a guide to the resident councillors, to show the nature of the annual reports henceforward required from them, and such as should all along have been transmitted, either by them or the officer in charge of the department. The report is, however, the proper duty of the resident: unless men are required to write on particular subjects, they will not inquire, and if they do not inquire, they are not likely to be informed. The main point is the correct compilation of the statements of imports and exports, and this can only be ensured by the constant superintendence of a covenanted servant over the book of daily entries which ought to be kept of every article imported and exported, whence from and to what place; the articles so put down should be set out regularly in their places, and with their amount, at least once in every month in due form, and from such monthly detail the annual statements to be transmitted to higher authority should be made out: there is reason to fear this has not hitherto been done. It would appear that the whole daily entries here remained unnoticed and unarranged until the period arrived when the annual statements were to be made, too late for the discovery and rectification of errors and discrepancies. The statements of imports and exports having thus been carefully made up, the resident should then frame his report therefrom; the trade between the settlement and every place respectively trading with it, except the two other settlements in the Straits, should be minutely examined article by article; the variation, increase or decrease, in each article ascertained, and the cause of such increase and decrease inquired into and reported along with any observations that occur as to apparent inconsistencies, as well as on the best means (as far as public arrangements are concerned) of improving the trade: by apparent inconsistencies is meant the re-export of goods to the places of their known produce; the import of goods from places to which the same are in general course of trade exported, and *vice versa*, of which instances appear in the statements, and which must arise from some peculiar or temporary cause. A figured statement comparative of the increase and decrease in each year will not be required, as such should form the subject of express explanation in the body of the report. It will be seen as before, that the general statement should contain only the trade with places beyond the limits of Penang, Singapore, and Malacca; the reason is, that the internal trade is composed almost entirely of the articles imported from other places, and the insertion in the general statement would only be a repetition and exaggeration of the general trade. The statements showing the intermediate trade, though not generally of importance, are useful however in showing the ultimate destination of goods imported to any one, and general disposition of the balance, that is, the excess of import over export, and may therefore be continued. The import and export of specie should, as at present, be kept distinct; but a separate note should be made of imports or exports of specie on account of Government.

In framing the statements of the last year but little discretionary consideration is shown. In fixing the forms, the names of all and only the articles which happened to be enumerated in the statement of the day when the form was made, were inserted in the alphabetical list. It was meant as a guide, not as a limitation of articles which

Commercial

APPENDIX,

No. 17.

continued.

(Enclosure No. 1)

Minute of

R. Fullerton, Esq.

29th April 1830.

depend on the trade. In the Malacca statement all the articles are unnecessarily enumerated in the alphabetical list, although the column of some are blank, none having been exported or imported. At Penang, the list is strictly adhered to, although other articles appear to have been imported: for example, opposite the head of iron are interpolated, in the inner column, a quantity of lead, copper and tutenague, and in like manner arrack and gin opposite brandy; these articles should all have been inserted in their alphabetical places. The draft of regulation for insuring the correct registry of the imports and exports of the three settlements having been returned unsanctioned by the Honourable Court, in consequence of its containing a clause subjecting opium, the produce of countries other than the British territories in India, to the duty for protecting the Bengal monopoly, the insertion of which has not been deemed advisable; the preparation and transmission of a new draft has become necessary. Should the provisions of that regulation appear to the resident councillor to require any alteration, they should submit an amended draft with any observations they may have to offer, in order that the draft ultimately determined on may be forwarded as soon as possible. I conclude this report with the expression of my hopes, that after the discussions which have taken place during the year, the statements of imports and exports will be made up for the year ending 30th instant, in perfect form, and accompanied by a report of the resident councillors respectively, in the manner here pointed out.

(Signed) R. FULLERTON.

(Enclosure No. 2.)

(Enclosure No. 2.)—MINUTE of R. IBBERTSON, Esq., dated 29th April 1830.

Minute of
J. Ibbertson, Esq.
29th April 1830

I HAVE perused with considerable interest as well as benefit the Honourable the President's report of this date, upon the trade of these settlements, not unmixed however, I regret to observe, with considerable vexation at the gratuitous reflections I am there subjected to. To remain altogether silent under such reproach would, I fear, argue a wilful acknowledgment that it was deserved, but feeling otherwise, and that it is unmerited, I may be excused in offering such observations as the attack appears to call for.

In some of the President's minutes and memorandums he will himself, I believe, admit having frequently denominated this island "the seat of government," and in consequence, that the establishments &c. here have ever been maintained upon a scale at least double those of the sister settlements in the Straits. All records and accounts are here collected and finally prepared for transmission to the authorities at home. The secretary only, when absent hence, receives his travelling expenses. The office of general account and audit is fixed here; and only lately on a revision of establishments, in August last, were any of the forms in use at the larger governments in India ever dispensed with here. Heads of offices under such a system are always expected and required to make their own reports, and I believe the present is the first deviation that I have read of expressive of the contrary; I doubt, indeed, whether my interference with the heads of offices would not be considered entirely as an act of supererogation on my part, and remonstrated against accordingly. They have always received their orders in writing from the secretary direct; and in regard to their very statements, I observe that the individual in charge of the import and export office is expressly desired to furnish them, although I am, for the first time, told they should have emanated from myself. Since September 1824 to the present date, the Honourable the President, in the aggregate, has not been absent from this island above nine or ten months. The resident Councilmen (particularly here) have little, if any, discretionary power; they cannot make or amend an order to any subordinate, and his interference even in any way might be construed into unnecessary intermeddling. My signature to these statements, it is also to be observed, was never within the line of my duty. But

as the President has now expressed a hope that reports from the resident should accompany them in future, I can have no possible objection, however hurt I may feel at the manner of the request.

(Signed) R. IBBETSON.

APPENDIX,
No. 17.
continued.
(Enclosure No. 2.)

(Enclosure No. 3.)—MINUTE of R. FULLERTON, Esq., dated 29th April 1830.

THE first paragraph of my Minute of 29th April, will show that this Settlement is expressly excepted from the general remarks, because it has been considered the seat of government. No order, that I am aware of, was ever sent to Mr. Ibbetson to prepare these statements, they have always been prepared at the Custom-house; but with the duty as done at Penang no fault has been found. None of the remarks in the foregoing Minute were ever intended to apply to Mr. Ibbetson retrospectively, and they can only apply prospectively with reference to the now contemplated arrangement; and I must confess I am surprised that any Minute or observation in this case was thought necessary.

(Signed) R. FULLERTON.

(Enclosure No. 3.)
Minute of
R. Fullerton, Esq ;
29th April 1830

APPENDIX, No. 18.

EXTRACT of LETTER in the Commercial Department, from the Court of Directors to the Governor-general in Council, dated May 30th 1832.

Para. 31. A new source of supply for the market of Europe has been lately resorted to: some quantities of nitrate of soda have been imported into France from South America, and one or two cargoes into London, and also into Liverpool. This commodity is becoming an object of attention, but our present information respecting it is limited. We have reason to believe that it will not answer so well as saltpetre (nitrate of potash) for making gunpowder, but it is equally applicable to the uses of most of the manufacturers, and for the curers of provisions, and is said to afford a greater proportion of nitric acid than saltpetre; we send a sample of nitrate of soda in the packet, for the inspection of the Board of Trade.

APPENDIX,
No. 18.

Letter from Court
of Directors to
Bengal
Government, on
Nitrate of Soda ;
30th May 1832.

APPENDIX, No. 19 (1).

(1).—MEMORIAL of Mr. C. R. READ to the Right Honourable CHARLES GRANT, dated 13th July 1831.

Sheweth,

THAT on the 7th April last your memorialist petitioned the Honourable the Court of Directors of the East-India Company for permission to export to the settlement of Singapore 1,000 stand of muskets with bayonets, and 300 barrels of gunpowder; and further to permit the trade in these articles to be carried on at Singapore, under such regulations as will secure the Company's Indian interests from suffering therefrom.

On the 6th of May your memorialist received an answer to such petition from the secretary of the Honourable Company, refusing compliance with the tenor thereof.

Your memorialist takes leave to annex a copy of the said petition and answer thereto; and as he feels convinced that at the great distance at which the settlement is situated

APPENDIX,
No. 19 (1).

Mr. C. R. Read's
Memorial
on Export of
Military Stores to
Singapore

APPENDIX,
No. 19 (1).
continued.

Mr C R Read's
Memorial
on Export of
Military Stores to
Singapore

from any of the Honourable Company's Indian possessions, no possible harm or detriment can accrue to their interest, from the trade in them being permitted at Singapore, more than is now the case from the commerce carried on in them by the French and Americans;

Your memorialist prays that the Honourable the Board of Control will take the subject into their consideration, and that through their interference orders may be transmitted to the proper authorities in India, to permit the free and uninterrupted trade in these articles at Singapore and the adjacent islands, including the west coast of Sumatra, and at all places lying to the eastward of the Straits of Singapore, which limitation your memorialist conceives will effectually prevent any ill consequences to the interest of the Honourable East-India Company, and will enable the merchants of Singapore to participate in a lucrative trade which is at present monopolized by foreigners.

And your memorialist, as in duty bound, will ever pray, &c.

(Signed) C. R. READ,
Of the Firm of A. L. Johnston & Co.

(Enclosure No 1)
Letter from
Mr C R Read
to the Court of
Directors;
7th April 1831.

(Enclosure No. 1).—LETTER from Mr. C. R. READ to the Court of Directors of the East-India Company, dated 7th April 1831.

Honourable Sirs:

BEING desirous of shipping a small quantity of arms and ammunition to Singapore, I take the liberty of requesting the permission of your Honourable Court to export to that settlement 1,000 stand of muskets with bayonets, and 300 barrels of gunpowder, in whole, half, or quarter barrels.

I am perfectly aware it is contrary to the regulations laid down by your Honourable Court that arms and ammunition should be in any way introduced into your Indian possessions, but I beg to submit that the permission to trade in them at Singapore would not at all add to your insecurity, but on the contrary would enable you to check the introduction at any time when you might deem it advisable to do so.

The situation of Singapore, so distant from your Indian possessions, renders it impossible to convey arms and ammunition from the former to the latter in native boats or prahus, and the exportation from Singapore in vessels bound to any part of India, might be prohibited, thereby confining the trade to countries laying east of the Straits of Malacca, and the islands in the vicinity of the settlement.

A considerable trade in both arms and ammunition is at present carried on by the French and Americans with both sides the Gulph of Siam, Cochin China, and the Eastern Islands, the British and Dutch only being excluded from participating therein; and there can be little doubt that if a trade in these articles were permitted at Singapore, all foreign competitors would soon be driven from these markets, and thus the supply might be checked whenever the Government of India might deem it advisable, should they find the trade in them in those countries detrimental to your interests.

The existing prohibition to trade in them at Singapore operates only in favour of foreign nations, without curtailing the supply to the natives of the countries alluded to, as both French and American vessels annually visit them with cargoes, of which these articles form a considerable portion.

Under these circumstances, I trust that your Honourable Court will see fit, not only to grant the permission I now solicit, but also to direct that in future the trade in these articles

articles at Singapore may be permitted, under such regulations as will insure its not having any more injurious effect on your Indian interests than the trade now carried on by foreigners.

I have, &c.

C. R. READ,

Of the Firm of A. S. Johnston & Co. of Singapore.

APPENDIX,
No. 19 (1).
continued.

(Enclosure No. 1.)

(Enclosure No. 2).—LETTER from PETER AUBER, Esq. to C. R. READ, Esq., dated East-India House, 6th May 1831.

Sir:

THE Court of Directors of the East-India Company have considered your letter requesting permission to export to Singapore 1,000 stand of muskets with bayonets, and 300 barrels of gunpowder; requesting also that in future the trade in these articles at Singapore may be permitted, under such regulations as may guard the Company's interests; and I am commanded to inform you, that it would be contrary to the Court's practice to allow military stores to be exported by individuals to any of the Company's possessions in India, and that the Court must decline to depart from that practice as respects the particular Settlement to which you have referred.

I am, Sir, &c.

(Signed) P. AUBER, Secretary.

(Enclosure No. 2.)
Mr C R Read's
Memorial
on export of
Military Stores to
Singapore

(2).—LETTER from THOMAS HYDE VILLIERS, Esq. to PETER AUBER, Esq., dated India Board, 16th July 1831.

Sir:

THE Commissioners for the Affairs of India having had under their consideration a Memorial from Mr. Read, of the firm of Messrs. Johnston and Co., of Singapore, respecting the refusal of the Court of Directors to allow the exportation to that island of certain military stores, have directed me to request that you will represent to the Court that it appears to them doubtful, on a reference to the Act 4 Geo. IV., c. 89, s. 5, whether the East-India Company's license be requisite for the legal exportation of such articles to Singapore, and that it is therefore desirable that the opinion of the Company's counsel should be taken upon this subject. The Board desire to be favoured with a copy of the opinion which Mr. Serjeant Spankie may give.

I am, &c.

(Signed) T. HYDE VILLIERS,

APPENDIX,
No. 19 (2).

Letter from
H. Villiers, Esq.
to P. Auber, Esq.;
16th July 1831.

(3).—LETTER from PETER AUBER, Esq. to THOMAS HYDE VILLIERS, Esq., dated East-India House, 22d July 1831.

Sir:

WITH reference to your letter of the 16th instant, I am commanded by the Court of Directors of the East-India Company to transmit to you, for the information of the Commissioners for the Affairs of India, copy of a case submitted to the Company's standing counsel, respecting the exportation of military stores to Singapore, together with a copy of his opinion thereon.

I am, &c.

(Signed) P. AUBER, Secretary.

APPENDIX,
No. 19 (3).

Letter from
P. Auber, Esq. to
T. H. Villiers, Esq.,
22d July 1831

APPENDIX,
No. 19 (4).
continued.

Case of the East-
India Company
submitted to Mr
Serjeant Spankie;
in July 1831

(4).—COPY of a CASE for the East-India Company.

By this Act,* which is intituled “An Act to consolidate and amend the several laws now in force with respect to trade from and to places within the limits of the charter of the East-India Company, and to make further provisions with respect to such trade, and to amend an Act of the present Session of Parliament for the registering of vessels, so far as its relates to vessels registered in India,” it is enacted† “That so much of the Act (therein recited) of 53 Geo. III., as authorizes His Majesty’s subjects to carry on trade and traffic to and from the ports and places within the limits of the said Company’s charter, with all the provisions, restrictions, and limitations in the same Act contained for the regulation of such trade, and for the disposition, in the United Kingdom, of all articles manufactured of silk, hair or cotton, wool or any mixture thereof, imported under the authority of the said last-mentioned Act, from any port or place within the limits of the said Company’s charter; and that the whole of the Acts (therein recited) passed in the 54th, 55th, 57th, and 59th years of the reign of his then late Majesty, and the said Act passed in the 2d year of the reign of his then present Majesty be repealed, except as to such voyages and adventures as should have been actually commenced under the authority of the same Acts, or any of them; and except as to any suits or actions commenced or then depending relative to the provisions thereby repealed, or any of them:”

Provided‡ “That it shall not be lawful for any person or persons to carry any military stores to any place upon the continent of Asia, between the river Indus and the town of Malacca or the peninsula of Malacca inclusive, or to the said Company’s factory at Bencoolen in the island of Sumatra, or its dependencies, save only the said United Company, or such as shall obtain their special leave and license in writing, or a special leave and license in writing under their authority, for that purpose.”

By this Act,§ which is intituled “An Act for transferring to the East-India Company certain possessions newly acquired in the East-Indies, and for authorizing the removal of convicts from Sumatra,” after reciting the Act of the 53d Geo. III., c. 135, and reciting that the island of Singapore in the East-Indies had, since the passing of the said Act, been occupied by the said United Company; and reciting, that by a treaty concluded between His Majesty and the King of the Netherlands, on the 17th day of March 1824, the King of the Netherlands had agreed that all his establishments on the continent of India, and also the town and fort of Malacca and its dependencies, should be ceded to His Majesty; and it was by the said treaty further stipulated, that the factory of Bencoolen and all the English possessions in Sumatra should be ceded to His Majesty the King of the Netherlands: it is enacted, “That the said island of Singapore, and also all the colonies, possessions, and establishments ceded to His Majesty by the said treaty, shall be transferred to the United Company of Merchants of England trading to the East-Indies, and holden by the said Company in such and the same manner to all intents, effects, constructions, and purposes whatsoever, and subject to the same authorities, restrictions, and provisions as the factory of Bencoolen, and the possessions in the island of Sumatra, were vested in and holden by the said Company immediately before the conclusion of the said treaty.”

On the 7th April last the following application was made to the Court of Directors of the East-India Company.

[Vide preceding letter from Mr. C. R. Read to the Court of Directors, dated 7th April 1831.]

In reply to the above application the Court of Directors, on the 6th May 1831, informed Mr. Read, that “It would be contrary to the Court’s practice to allow military stores

stores to be exported by individuals to any of the Company's possessions in India; and that the Court must decline to depart from that practice, as respects the particular Settlement to which he has referred."

It appears that Mr. Read subsequently laid a memorial before the Board of Commissioners for the Affairs of India on the subject of his application; the Court of Directors having received the following communication from the Board.

[Vide preceding letter from Mr. Villiers to Mr. Auber, dated 16th July 1831.]

Your opinion is therefore requested, "Whether any person may lawfully export from Great Britain to the island of Singapore any military stores, without the special leave or license in writing of the East-India Company?"

The 4th Geo. IV., c. 80, s. 5, by itself does not impose any prohibition as to the exportation of military stores from Great Britain to Singapore, nor require any license from the East-India Company.

It appears to me, however, that the 5th Geo. IV., c. 108, s. 1, intended that the system of regulation applicable to the factory of Bencoolen, &c. should be extended to Singapore, and the possessions, &c. ceded by the King of the Netherlands, as fully as if the whole detail had been enumerated. The words are sufficiently comprehensive to embrace every kind of authority, restriction, and provision under which the factory of Bencoolen was held by the Company. The title, the authorities, the restrictions, the provisions, as they existed in the old establishment, accompany the exchange, and, as usually happens in exchange, are declared to attach upon the exchanged and substituted possessions. It is enacted, "That the said island of Singapore, and also all the colonies, possessions, and establishments ceded to His Majesty by the said treaty, shall be transferred to the United Company of Merchants of England trading to the East-Indies, and holden by the said Company in such and the same manner, to all intents, effects, constructions, and purposes whatsoever, and subject to the same authorities, restrictions, and provisions as the factory of Bencoolen, and the possessions in the island of Sumatra, were vested in and holden by the said Company immediately before the conclusion of the said treaty."

It is clear that military stores could not have been exported from Great Britain to the factory at Bencoolen in the island of Sumatra, or its dependencies, without a license from the Company, as provided by 4 Geo. IV. c. 80, s. 5; and I am therefore of opinion, that under the operation of the 5 Geo. IV. c. 108, s. 1, applying the regulations of 4 Geo. IV. c. 80, s. 5, by substitution to Singapore, no person can lawfully export from Great Britain to the island of Singapore any military stores, without the leave or license, in writing, of the East-India Company.

Temple, 19th July 1831.

(Signed)

R. SPANKIE.

(5.)—LETTER from T. HYDE VILLIERS, Esq. to P. AUBER, Esq. dated India Board, July 30th 1831.

Sir:

I HAVE to acknowledge the receipt of your letter opinion of Mr. Serjeant Spankie with respect to the export of arms to the continent of India, should also extend to Singapore. The Commissioners for the Affairs of India have that you will move the Court of Directors to take into their consideration, whether, in a commercial

instant, transmitting the opinion of military stores to

that it by no means which are taken to the exportation to Singapore desired me to request consideration, whether, in a commercial

APPENDIX,
No. 19 (4).

(continued).

Case of the East-India Company submitted to Mr. Serjeant Spankie; in July 1831

Opinion

APPENDIX,
No. 19 (5).

Letter from T. H. Villiers, Esq. to P. Auber, Esq., 30th July 1831

APPENDIX,
No. 19 (5).
continued.

commercial point of view, it would not be well to comply with the request of Mr. Read, to be allowed to participate in a trade which it appears is already carried on by foreigners.

I am, &c.

(Signed)

T. HYDE VILLIERS.

APPENDIX,
No. 19 (6).

Export of
Military Stores to
Singapore

(6.)—LETTER from WILLIAM CARTER, Esq. to T. HYDE VILLIERS, Esq. dated East-India House, 1st September 1831.

Sir :

THE Court of Directors of the East-India Company have considered your letter dated 30th July last, acknowledging the receipt of Mr. Auber's letter of the 22d of that month, and copy of the opinion of Mr. Serjeant Spankie, with respect to the exportation of military stores to Singapore, and submitting to the Court whether, in a commercial point of view, it would not be well to comply with the request of Mr. Read, to participate in a trade which it appears is already carried on by foreigners.

In deciding upon the request of Mr. Read, and upon other applications to the same effect, the Court were influenced by considerations of a political nature; but having reviewed all the circumstances of the case, and being of opinion that it is impracticable to prevent the introduction of military stores into Singapore whilst the trade in those articles is carried on by foreigners, and that in a commercial point of view there are no objections to allowing British subjects to participate in that trade, the Court have been induced to comply with the application of Mr. Read, who has been informed accordingly.

I have, &c.

(Signed)

WILLIAM CARTER,
Assistant Secretary.

APPENDIX, No. 20.

APPENDIX,
No. 20.

Letter from
Dr. Wallick to
H. St. George Tucker,
Esq.
on Productions, &c.
of India;
12th Oct 1828.

EXTRACT of a LETTER from Dr. WALLICK to H. ST. GEORGE TUCKER, Esq., dated 8, Turnham-green Terrace, 12th October 1828.

WITH regard to the article of tobacco, I have not the slightest doubt that the very best sorts might be grown in India, provided properly qualified lands were appropriated to their cultivation; and above all, if the proper mode of reaping and preparing the leaves were to be adopted. The kind grown at Belda is inferior probably to none in the world, and I know that the late Mr. Glos, of Bhaqualpore, used to rear the Havannah kind with very great success, some eight or ten years ago. I have brought musters with me for the India House of the Martaban species, which is the one exclusively used in the Burmah territories, and may, perhaps, be approved of in London. It is susceptible, however, of much amelioration.

That there is a sort of cotton, the produce of the West Indies, rather of Barbadoes, which has been cultivated with complete success in the Company's territories, I can assert with confidence, because I am in possession of an extract of a general commercial letter from the Court, translated officially from the Board of Trade at Calcutta, in which it is pronounced to be superior to any kind procurable in the London market. I cultivated it in my garden at Tittygheer (near Borrahpore) during several years, in which it continued attached to the botanic garden at Calcutta. This fact, if unknown to me, I have no doubt prove gratifying, more especially when I venture to assure you in my humble opinion, it is the inferiority of the machinery employed by the natives for cleaning the wool from the seed which has hitherto most

most effectually stood in the way of the Indian sorts competing successfully with those that are imported from the Western hemisphere.

Believe me, dear Sir, the man does not live who desires to speak with greater caution on matters connected with the agricultural capabilities of any country than I do. It will not answer to theorize on such occasions; and people who, sitting snugly within the *otium* of their learned study, pretend to dictate as to what must and ought to grow and prosper in distant countries, because, as they commonly reason, soil, climate, latitude, &c. *appear* to be in some as in others, are in ninety-nine cases out of one hundred woefully mistaken in the end. Nature is bountiful and profuse in her gifts, but she will not, do what we may, be dragooned into the rank and file of our European polished sciences. If, therefore, it should appear to you that I am perhaps too sanguine in respect to what I have mentioned on the subject of cotton and tobacco, as articles of high improvement in the Company's territories, I beg you will take it for granted that experience, and *not theory*, is the ground on which I have proceeded.

May I be permitted to ask if you are aware of the new and very important article of cultivation that has within these six years been brought into the field in Bengal—coffee? I can speak with much confidence on this point; for, under the specific leave of the Supreme Government, I led the way as a coffee planter in 1822, and in compliance with my application, a most liberal and hitherto I believe unique privilege was granted in 1824 to all those engaged in that particular branch of industry—permission to hold extensive tracts of land in their own names on long leases. This subject is of very deep interest, and ought, for the honour and credit of the Company, to be made widely known, because I find that people are utterly unacquainted with the fact. Will any one, after it shall have been made known, presume to deny that every facility and advantage is readily and munificently granted, on a fair and proper representation being made to the lawful authorities, to all persons who may wish to invest their capital in India on subjects of agricultural speculation?

While at Glasgow I ascertained that a set of spinning and weaving machinery, worked by steam, had been sent out to Bengal, under charge of properly-instructed people. This I had heard reported before, but I would not credit the thing. What extraordinary revolutions may we not expect to be effected in cotton fabrics from that source alone! But again this proneness to doubt comes over me: are we quite positive that European machines, European minute attention to saving of time and manual labour, may not powerfully counteract the well-known durability of our Indian routine-made stuffs? The Nipal paper, so valuable for its durability, being absolute proof against insects, nay, against the *white ant* even, which devours every thing that is or has been organic (provided it be not fossil), loses all its virtue as soon as it is produced by means of European paper mills, and blanched by European art. I much fear that Indian muslins and yarns will lose their proverbial durability in proportion as they are *too much* meddled with by European hands.

APPENDIX, No. 21.

OBSERVATIONS on the CULTIVATION of the TEA PLANT, for Commercial Purposes, in the mountainous part of Hindostan. Drawn up at the desire of the Right Honourable CHARLES GRANT, President of the Board of Control for Indian Affairs, by Dr. WALLICH.

It has been usual to look upon the tea plant in the light of one of those vegetable productions of which the natural growth is limited within narrow geographical boundaries, and to imagine that, like the nutmeg, the clove, the cinnamon, camphor, and other trees of extensive commercial importance, its native country occupies but a small and confined

APPENDIX, No. 20.

continued.

Letter from
Dr. Wallich to
H. St. Geo. Tucker,
Esq.
on Productions, &c
of India;
12th Oct. 1828

APPENDIX, No. 21.

Cultivation of the
Tea Plant
in Hindostan

APPENDIX.
No. 21.
continued

Cultivation of the
Tea Plant
in Hindostan.

spot on the surface of the globe. Without entering in this place into any unprofitable discussion as to its probable origin in one particular spot in China or Japan, it may be fairly assumed that the tea plant has, from time immemorial, continued the very reverse of being circumscribed or local in the geographical extent of its distribution, inasmuch as it grows wild, or at least in a perfectly naturalized state, and maintaining all the properties of the genuine plant, on a vast space, comprising not less than 30 degrees of latitude and 35 degrees of longitude. But although the shrub is thus widely dispersed, although it is found within the tropics as far south as the 17th degree of north latitude, in Cochin China, and beyond the equatorial regions so far north as 45 degrees in Japan, it will be proper on this occasion to consider the plant only with reference to its existence in China, since it is the commodity as obtained exclusively from thence which forms the basis of the present inquiry. By far the most important cultivation of the plant is carried on in the provinces of the Chinese empire situated between the 27th and 30th parallels of north latitude, where the black teas are almost entirely produced; but it is also reared in vast quantities to the south, nearly as far as the sea-shore of Canton, and to the north as far as 40 degrees, in the mountainous regions beyond Pekin.

There is a remarkable circumstance, connected with this part of my subject, which is deserving of attention. Unlike a great many other objects of great agricultural interest or general utility, the botanical genus to which the shrub yielding the tea leaf belongs consists of no more than one single species; and the small natural group to which it appertains comprises only one other genus, namely the *Camellia*. This genus, together with its near ally the tea shrub, belong exclusively to the eastern hemisphere: it consists of several species, which have been found wild in Japan, China, Cochin China, in Nipal, and on the mountains bordering on the north-east frontiers of Bengal. Neither of these two genera have ever been met with in any part of the western hemisphere.

With respect to the natural character of the tea plant, it is altogether foreign to my plan to enter into any great detail. It is a hardy evergreen shrub, attaining a man-height, easily raised from seeds, and multiplied by cuttings or layers. It endures the vicissitudes of widely different foreign climates so well, that it has been ascertained by experience it will grow luxuriantly within the Tropics; and even in this country it will bear the winter in sheltered situations in Devonshire and Cornwall, although it rarely blossoms except in the stove or conservatory. It requires but little care during its tenderage, except what is called for by the perishable nature of its seeds, on account of their oiliness, and by the ordinary precautions of manuring and protection of the young plant. Few plants are more indiscriminate in their localities of soil and climate, for it is cultivated on comparatively low and depressed situations, as well as on the brows of rugged hills. The plant, generally speaking, is contented with a gravelly or sandy soil, mixed with a scanty proportion of vegetable mould; but it delights most in shady declivities of hills, in moist vallies and the banks of rivers; situations which are peculiarly favourable to the luxuriant growth of the superior sorts of teas, being temperate and mild in their alternations of heat and cold and other atmospherical changes, exposed to the sun of a genial summer during one half of the year, and sheltered from intense degrees of frost and snow during winter. It may therefore be safely assumed that the shrub is cultivated to the greatest advantage in a temperate climate, where the thermometer ranges between 30° and 80°, where the heat in the summer season is never scorching or dry for any length of time, and where the winter is not marked by any very severe frost or snow.

The introduction of so valuable a plant into countries foreign to its own must always have been an object of anxious solicitude; and we find accordingly that various attempts have been made to accomplish it. The ultimate results, however, have always been extremely unsatisfactory, owing to circumstances which could have produced no other consequences, and which, as will be presently seen, have entirely vitiated every practical inference to be deduced from the experiments themselves. The shrub has indeed become naturalized in several remote and dissimilar countries; but the quality of its produce has invariably proved greatly deteriorated, or altogether changed from that of the parent plant.

plant. Before I proceed to give some particulars of the experiments that have been made, it may be proper to premise a few observations on the conditions which ought at all times to regulate our attempts at naturalizing, for any useful purposes, the vegetable productions of one country in another.

An exact conformity of soil and atmospheric phenomena constitute the obvious data by which we are to be guided on such occasions. But since it does not often happen that accurate or sufficient information can be obtained upon those points in remote parts of the world, we must have recourse to the general laws that have been found to prevail in the distribution of heat and the other conditions of the atmosphere, with regard to latitude and other well-known circumstances; and a judgment has to be formed from a calculation of probabilities, instead of from a comparison of exact data. In all cases where a favourable combination of both the direct and the collateral arguments forms the basis of an agricultural undertaking of this nature, the result of it cannot fail to be successful.

The first point which must be ascertained is, how far the countries are likely to correspond in the degree of their temperature. The probability of a conformity in this respect may, as a general rule, be judged of by the agreement or disagreement of their latitudes, provided the countries in question are both situated in the same hemisphere; for although latitude does not go along with temperature, if we compare the eastern with the western hemisphere, the latter being generally colder than the former on the same parallels, both south and north of the equator, the mean temperature of 40° north latitude in the old world being 63°, while in the new world it is only 54°, and that of the Mauritius in 20° 9' south latitude, being 80° 4', while that of Rio Janeiro in 20° 59' south latitude is only 74° 3', yet in the same hemisphere the isothermal lines (or imaginary lines connecting places in which the mean temperature of the year is the same) do nearly accord with the parallels of latitude, with a few exceptions. This, however, is very much regulated by the geological formation of a given country: mountainous districts being much colder than low, flat regions, situated to the northward of them. It has been calculated that in the tropical countries the decrement of caloric, as we ascend in the atmosphere, is equal to 1° north latitude for every 396 feet of vertical elevation, so that the temperature of land 4,512 feet above the level of the sea, in 10° north latitude, would approximate that of open, flat countries on a level with the sea in 22° north latitude: but beyond the tropics, in Europe at least, it is supposed that the reduction of temperature is nearly equal to 1° north latitude for every 540 feet of perpendicular height.

But as vegetation is less influenced by the mean temperature of the year than by the heat of summer and winter taken separately, it often happens that corresponding mean temperature will not prove a sufficiently accurate guide to forming an opinion upon acclimating; for a plant produced in a country with an exceedingly high temperature in the summer may be able to bear very severe cold in winter, and yet when transferred to a country where the mean temperature of the year is higher, but in which the winters are milder and the summers cool, may be found incapable of being cultivated. Hence our second inquiry should be directed to the mean temperature of summer and winter, considered respectively of the countries whose productions it is wished to assimilate.

A third condition necessary to render success probable is an identity of the atmosphere in regard to humidity, pressure, prevailing winds, &c. Unfortunately the state of our meteorological knowledge is in general not such as to furnish us with exact information on all these points, and therefore the only other method of judging that is open to us consists in a comparison of the floras of the two given countries. If it should appear that there is an identity, or a considerable similarity in their vegetable productions, it is probable that any plant taken from one will thrive in the other; and in proportion as the vegetation of the two countries differs, does the probability diminish of any useful object being attained by endeavouring to exchange their species.

APPENDIX,
No. 21.
continued.

Cultivation of the
Tea Plant
in Hindostan.

A very slight acquaintance with the character of the countries where the attempts were made to introduce the cultivation of the tea plant, is sufficient to account for the total failure of them. At Penang, the late Mr. Brown, misled by the unconnected fact that the shrub stood well the climate of the island, conceived the project of cultivating it on an extensive scale as a commercial speculation. He accordingly established a large tea plantation at Glugor, and even took pains to procure several Chinese from Canton on purpose to superintend the undertaking. Upon the whole the plants grew remarkably well; but when the period arrived for commencing to reap the harvest of all the labour, time, and expense that had been incurred, the quality of the produce was found of a very inferior description, and the infusion of the leaf had moreover acquired the very appalling property of a nauseating, and even slightly emetic drug; as if the identical variety possessing this effect, which the Jesuit missionaries pretend does exist in certain parts of the Chinese empire, had unfortunately found its way into Penang, and become the parent stock of Mr. Brown's plantation. However, if we recollect that Prince of Wales' Island is situated between 5° and 6° north of the equator, that its highest hill does not exceed 2,500 feet in elevation, that in short every feature of the climate is tropical, we cannot be surprised at the result of the attempt; and it is hardly necessary to add, that all further idea of cultivating the plant for the sake of its leaf has been long abandoned in that quarter.

In Java similar trials, made under very similar circumstances, have proved equally fruitless, and have in consequence been given up. I am informed that no better success has attended some experiments which were made many years since by the Dutch Government in the southern parts of Ceylon.

About twenty years ago the cultivation of the tea plant was commenced on a large scale at Rio Janeiro, and as far as concerns the naturalization of the shrub a certain degree of success attended the measure; but the produce proved to be so bad in its flavour, that the plantation has of late been nearly relinquished. I have had an opportunity of examining a sample of tea produced in the Brazils; in appearance it resembled the finer sort of green tea, but the taste of the infusion was exceedingly bad, and unlike that of the common article. It is needless to dwell on the cause of the failure in this instance.

From what has been advanced in speaking of the general rules that are to be observed in all our endeavours to naturalize the plants of foreign and distant climates, it is obvious that we cannot expect to succeed unless we pay strict attention to those laws of nature in the distribution of the plants on the surface of the earth, which have been traced by the labours of some of the first naturalists and agriculturists; and on the other hand, it must be allowed that vague and unsatisfactory experiments, such as those were which have been enumerated above, ought not to have any weight in the solution of the problem—whether the tea plant admits of being advantageously cultivated in foreign countries for commercial or agricultural purposes. The time has arrived when this question has assumed a more than ordinary degree of interest; and there exist territories within the British dominions in the East-Indies, agreeing so perfectly with those of the tea provinces, that no doubt can be entertained of their being capable of producing tea equal to the best kinds ever obtained from China; unless, indeed, it should be contended, that the plant differs from all others on a point in which the whole vegetable kingdom has been found to agree, and that it forms an exception to one of the most beautiful laws of nature.

The provinces of Kamron, Sennal, and Sirmore, contain situations corresponding entirely with what we know of those of China and Japan, in which the cultivation of the tea shrub is carried on to the greatest extent and perfection, not only in the characters of soil and climate, but likewise in all the collateral conditions of naturalization pointed out in a preceding part of this Report. They constitute the western and northern corner of Hindostan, and are subordinate to the Presidency of Bengal, being situated within 28° and 31° north latitude, and 76° and 81° west longitude, and extending from
the

the plains of the adjoining provinces to beyond the snowy mountains. In regard to climate and elevation, they are extremely diversified, possessing all degrees of temperature, from the scorching heat of a tropical sun or the temperate atmosphere of the tea provinces, to the severe winter of Chinese Tartary and the eternal snow of the Himalaya, with all the intermediate gradations; and rising from the level almost of the sea to the height of the loftiest peaks in the world. They are watered by the Sutlej and the Ganges, and by the countless tributary streams of both these rivers, and finally they possess every variety of soil. To all these advantages must be added the very striking and almost exclusive similarity of their general flora with that of China and Japan, amounting to absolute identity of species in some instances, and close similarity in many others. I have already had occasion to observe that a species of camellia grows wild in Nipal, and in publishing an account of it in 1818, I noticed that a tea shrub was thriving vigorously in a garden at Katmandu, ten feet in height, and producing plentiful flowers and fruits during the last four months of the year. During my visit to that capital some years afterwards I saw the shrub, and I ascertained that the seeds of it had been brought from Pekin by the return of one of the triennial embassies which are sent to China by the Goorka government.

If we take all these concurring circumstances into due consideration, we may surely entertain sanguine hopes that, under a well-directed management, the tea plant may at no distant period be made an object of extensive cultivation in the Honourable East-India Company's dominions, and that we shall not long continue dependent on the will and caprice of a despotic nation for the supply of one of the greatest comforts and luxuries of civilized life.

London, 3d February 1832.

APPENDIX, No. 22.

EXTRACT from Sir JOHN MALCOLM's General Minute of 30th November 1830,
on his Administration of the *Bombay* Government.

191. THE despatch of the Honourable the Court of Directors of the 18th February 1829 having called the attention of this Government to the importance of improving the quality of cotton grown in India, and having suggested, with this object in view, that an experimental plantation should be established at the expense of Government, I recorded my opinion* as to the mode in which the instruction of the Honourable Court on this head should be carried into execution.

192. In the despatch of the Court it is observed, that their attention has been directed in a special manner to this subject, and to look to India for the means of rendering Great Britain independent of foreign countries for a considerable portion of raw material, upon which her most valuable manufactures depend. But it is not as relates to England alone that this country is one of paramount interest. Cotton is the staple produce of some of our most valuable districts, to the improvement of which we must look in a great degree for any addition to the agricultural resources of our possessions, and consequently to any increase of the public revenue.

193. In execution of the measure proposed by me, a farm of 200 acres in extent was established in the vicinity of Broach, and was placed under the management of Mr. Finney, a gentleman who had been brought to my notice as being, from residence and occupation in an indigo plantation in Bengal, well qualified to superintend a farm. An allowance of 500 rupees per mensem, and 40 rupees for house-rent, was granted to Mr. Finney,

* Vide Minute, 16th July 1829.

APPENDIX,
No. 22.
continued.

Minute of
Sir J. Malcolm on
Products of India,
30th Nov. 1833

Finney, and he was placed in correspondence with and under the general control of the collector of the districts in which the farms are situated. He was furnished, also, with instructions founded on the information and observation contained in the Court's despatch, and also several important suggestions from Mr. Romer.

194. In further attention to the objects of the Court's despatch, several farms in the Southern Mahratta country and the Deccan were entrusted to Dr. Lush, the superintendent of the Botanical Garden at Daporee, who was likewise authorized to carry into execution a plan suggested by himself for introducing the cultivation of the Bourbon cotton into the garden of Daporee.

195. Under the impression that the scientific knowledge of Dr. Lush might be rendered further instrumental in promoting the success of the proposed experiment, he was directed to establish a correspondence with the collectors and with Mr. Finney, on all points connected with the process of culture, supplying each other with seeds, &c. &c.

196. With reference to the last paragraph of the Honourable Court's despatch, and with reference also to what had recently been done in Bengal, and to the benefits to be expected from the application of skill and capital to the improvement of the soil, letters were sent to all the principal houses of agency, announcing to the members of them that, both for the establishment of cotton plantations and for the purpose of raising indigo, or any other particular kind of produce, Europeans would be allowed to hold land on leasehold tenure. Almost exclusively occupied as the small European community of this presidency is with mercantile transactions, it is probable that few of its present members will be desirous of embarking in agricultural speculations; but still I considered it advisable that they should know that Government is not averse to their undertaking them.

Sugar Mill at
Bassem

197. A sugar-mill has been erected at Bassem, to which Government has given every support, and I cannot doubt but the example of Mr. Surgard, to whom it belongs, will stimulate many to follow his example.

Cultivation of Silk

198. The success with which the culture of silk has been introduced in the Deccan will be seen in my minutes.* Several Italians, particularly Mr. Multo, have shown a zealous skill which has met with the most liberal encouragement; and natives of capital have come forward to support speculations which they perceive must be attended with success.†

199. Mr. Graham, the civil surgeon at Ahmednuggur, has had a lease for fifteen years of several hundred acres of ground granted him, which, from being capable of easy irrigation, is most favourable to the plantation of mulberries, with which he has filled it. From his science, the money he embarks, and the ready sale there is for the produce in the flourishing town of Ahmednuggur, there can be little doubt of his success, and wealthy natives will by that be stimulated to imitate his example. Mr. Owen, the surgeon at Seroor, has commenced to manufacture upon a more limited scale; but the growth of his mulberries, and the firmness of the soil and climate of that place, are most favourable to the object; but this appears the case with many parts of the Deccan and the Southern Mahratta country. At the gaol of Poonah, as well as that of Dharwar, excellent silk is produced, and in the latter collectorate several natives have established manufactories upon a small scale; but the demand there is for this produce shows that the speculation is profitable, and is only prevented from being extended by the poverty of the inhabitants, and the want of enterprise, or perhaps of credit. As, however, the fact seems perfectly established that the silk produced in this country and in the Deccan will

* Vide Minutes, August, No. 30; October, No. 10; October, No. 28.

† Surajjee, a respectable Parsce inhabitant of Poona, having built some public works, and advanced upwards of £500 rupees in joining Mr. Math's silk manufactory, has been raised to the third class in honour which, as elevating him in the community, he highly prizes.

will soon, with proper encouragement, drive both the China and the Persian out of the market; and as the consumption of this article will be great when the interior of the southern parts of the peninsula can be supplied with silks produced in our provinces, it is worthy of the most serious attention of Government. The opinion of the principal collector at Dharwar should be required as to the degree of encouragement he deems necessary to promote this object. If my information is correct (and it is derived from a source on which I have every reliance*), the attainment of this object will be secured by a lease for nine or ten years, on liberal terms, of grounds favourable for mulberries, and a moderate advance of money in the first instance to men of respectability, who have proved their knowledge of the culture and manufacture of silks. I must add, that it is only by the introduction of produce like silk, by our improvement of the staple of cotton, and the success of our recent efforts to make and refine sugar, that can restore heart to many of our districts, and maintain our territorial resources.

200. The machinery in England has greatly lessened manufactures in cotton cloths, commerce is languid, and a state of internal peace prevents employment of men, as well as extra demand. From this combination of causes the population has become almost wholly agricultural, and the supply of grain (which is the principal produce) so far exceeds the consumption, that there has been a glut in the market for the last two or three years in this quarter of India. To that cause is chiefly ascribed the alarming failure of our territorial revenue last year, which exceeded thirty lacs of rupees. The accounts of the collectors have not been received for this year, but I am led to hope the deficit will not be above half as much as it was in 1829. Still it is only by encouraging richer produce, such as that to which I have alluded, and other articles besides grain, reviving commerce, and inducing men of wealth and enterprise to remain or settle in the interior, that we can give heart to the country, and enable it to pay its revenue. There is no want either of talent or spirit among the native population subject to our rule and control to accomplish this object; but it requires to be drawn forth; and to effect this it is necessary to exert all the activity, energy, and enlarged policy of a government which understands how to combine its own prosperity with that of the community subject to its authority.

APPENDIX, No. 23.

RESOLUTIONS OF LONDON MERCHANTS, 1830.

At a Meeting of the Merchants and Agents in London, connected with the Trade of the *East-Indies*, held at the Office of the East-India Trade Committee, Broad-street, on Tuesday, March 2d 1830,

RICHARD CAMPBELL BAZETT, Esq. in the Chair.

THE Report of the Committee, appointed at a previous Meeting, consisting of the following Gentlemen,—Edward Fletcher, Esq., David Clark, Esq., William Crawford, Esq., G. G. de H. Larpent, Esq., and James Mackillop, Esq., having been read and discussed,

It was Resolved unanimously,

1st.—That the time has arrived when it has become advisable that the opinions and views entertained by the East-India Merchants and Agents resident in London, in relation to the inquiries now pending in both Houses of Parliament, as connected with a renewal of the Charter to the East-India Company, should be publicly declared.

2d.—That

* I derived my information from Mr. Stevenson, late sub-collector at Dharwar.

APPENDIX,
No. 23.

continued
Resolutions of
London
Merchants, 1830

2d.—That it is the opinion of this Meeting, from the experience obtained since the opening of the Trade to the East-Indies, by the 53d Geo. III. and subsequent Acts, that the manufacturing, shipping, and commercial interests of the United Kingdom have derived very important advantages therefrom.

3d.—That this Meeting confidently relies that, in any renewal of the Charter to the East-India Company, due provision will be made to allow such free intercourse of British subjects with India, and to give to them such right of settling therein, as shall (consistently with the security of the British Government and the welfare of the Native population) be best calculated to promote the full development of the internal resources of that country, and, by the application of British skill and capital, improve its various products, especially those of sugar, cotton, silk, and tobacco: these being the principal means by which, in the opinion of this Meeting, a further extension of the valuable trade with India, now obstructed by the difficulty of obtaining returns, may be facilitated.

4th.—That, adverting to the fact of the Government of India having recently imposed a heavy and most vexatious burden on the commerce of that country, through the operation of the "Stamp Regulation," it is, in the opinion of this Meeting, due to the commercial interests of India that the trade should be at once relieved from that regulation, and protected against the imposition of any tax whatever by the local government without a fair opportunity being afforded to all parties affected thereby of canvassing its merits and provisions, and of submitting to the Government such objections as they may entertain to the measure previously to its acquiring the force of law.

5th.—That it is the opinion of this Meeting, and is supported by the personal experience of many of the members now present, that commercial dealings on the part of the Government of India, whether as merchants or manufacturers, are destructive of fair competition, and are in consequence calculated rather to depress than excite commercial enterprise through the countries subject to their dominion. It is therefore most important to the mercantile prosperity of India that the government of that country should be entirely restricted from all commercial dealings, save and except in reference to the export trade from India to Europe it be absolutely necessary to buy produce in open market, for the purpose of remittance in aid of the territorial demands on the London treasury, when no other means of supply can be obtained.

6th.—Whilst this Meeting expresses this opinion as to the bounds which should be set to the commercial interference of the Government of India, it desires to be distinctly understood not to uphold the usefulness or necessity of even such limited transactions, believing, as it does, that the condition of India will, under a free and open competition of commerce, afford further proof to the experience furnished by all other countries in the world, that the work of remittance can be best performed by means of the industry, intelligence, and economy of merchants individually interested in the result of their undertakings.

7th.—That this Meeting refrains, at this time, from making any declaration on the important question of the monopoly in the supply of tea to this country now vested in the East-India Company, because, in the opinion of this Meeting, that subject is interwoven with various other considerations, beside those purely commercial, which render a full investigation indispensably necessary, for establishing a fair and just decision as to the course which it may be wise to pursue in furtherance of the common interests of our country.

8th.—But, pending the consideration which is now giving to this most important subject, this Meeting cannot withhold its expression of its opinion that the interests of British merchants, ship-owners, and manufacturers, ought not to be any longer disregarded in relation to the commerce of China, nor the expression of its hope, that merchants of this country shall be no longer excluded from the exercise of their skill and the employment of their capital in a lucrative branch of the commerce of the world open to all other nations

nations of Europe and America; whilst the exclusion of the private merchants of the United Kingdom has, without producing any corresponding benefit to the East India Company, had the direct effect of checking the general commerce of the country, and narrowing the consumption of its manufactures.

It was further Resolved,

That the foregoing Resolution be embodied in petitions to the two Houses of Parliament respectively; and that the same be prepared for presentation with as little delay as possible.

R. C. BAKER, Chairman.

APPENDIX, No. 24.

CONSIDERATIONS relative to the applicability of Canals and Rail-roads to India.

1. The first point to be ascertained is the expense of constructing such works.
2. The returns which they would make.
3. The difficulties that might be expected, considering the present state of the affairs in that country; and,
4. It may be considered what particular lines there are in which such works would be most likely to be beneficial. These remarks will apply only to the Madras Presidency.

We may arrive at a pretty correct conclusion as to the expense of such works in India, by ascertaining their expense in England, and making allowance for the different rates of labour, &c. It has been found, taking the average of a vast number of works that have been already executed, that double rail-roads cost about £5,000 a mile. Of this sum about one-third is for the purchase of land, for fencing, for parliamentary and law proceedings, and other things which would either not occur at all in India, or would cause very little expense; the remaining £3,300 may be divided into two portions, viz. the price of the rails and the expense of cutting, embanking, bridges, laying the rails, &c.; the former in a double railway is about £1,500 (viz. 7,000 yards lineal of iron rail, 40lbs. to the yard, at £12 per ton), leaving the sum of £1,800 for the latter; as however these rails are calculated for bearing waggons of 12 or 14 tons, we should allow a less weight for rails intended for India, where it could not be necessary to use such large conveyances; and as, from the probable smallness of the traffic, a single rail-road would be sufficient, the calculation would be 3,520 lineal yards of rail; 24lbs. to the yard, at £12 per ton, £450; and allowing for paining places, £500; per mile, the price of the rails in England, which, allowing for the difference of exchange, freight, landing, &c. would amount at Madras to 7,500 rupees; or, omitting freight, as they might be carried out in the Company's ships as ballast, 6,500 rupees. For the remaining £1,800, the cost of embankments, &c.; after comparing the prices actually paid for that kind of labour in England with those in India, it appears that the proportion is about eight to one, or that 1½ rupees would pay for as much as 1 lb. in England; so that this part of the expense may be taken at 2,250 rupees, making the whole £10,250 rupees payable for a single rail-road in India.

A canal, with a single lock, would be about 2,000 rupees per mile, so that we may consider the estimated expense of the two works as equal. The canal must, however, be provided with a regular supply of water, which would probably increase the expense to 3,000 rupees; and the rail-road, which would probably require the construction of a great number of bridges, and the same expense of labour for discharging ballast as for embanking, would also require a considerable length, but doubtless there may be some cases in which the expenses would be much less.

5thly. Respecting the returns to be made by such works.

The present rate of carriage in India, I believe, about two annas (3d.) per ton per mile.

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continued.
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APPENDIX,
No. 24.

Considerations
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continued.

Considerations
relative to
the applicability
of Canals
and Rail-roads to
India.

The proportion of goods that can be moved at the same expense in England on a common road, canal, and rail-road, as found by fact, is about 1, 24, and 8 respectively; and the roads in India being so greatly inferior to the roads in England, we cannot take the proportions at less than 5, 20, and 10 for that country; hence the prices would be 2 annas is a one-fifth of a penny, and 4 a three-fifths of a penny. Now in England it is reckoned that such works ought to yield at least eight per cent. the interest of money being 5 per cent., on account of the risk and the time that the sums raised remain while the works are constructing; the return in India therefore should not be less than 15 per cent. Taking into consideration the ordinary interest of money there, and to this must be added 5 per cent. for repairs of rail-road, then, should pay annually $250 \times 20 = 1,750$ rupees, or £175 per mile, and as the saving on each ton of goods that passed along it would be 4 annas (nearly 2d.), 15,000 tons must pass along it annually, or 60 per day in each direction, or 120 of the ordinary bandy loads. A canal should pay $250 \times 20 = 1,000$ rupees, or £100 per mile; and as the saving on each ton of goods would be 1½ as. or 2 annas (nearly 2d.), 15,000 tons must be conveyed by it annually, which is the same as the rail-road. But, however, even on the supposition that the tolls on the rail-road or canal were equal to the present expense of land carriage, in which case nothing would be gained but the interest of the money at 15 per cent.; the tolls should not, certainly, exceed half the cost, and therefore the result is, that on any line such works would not answer as a rule, notwithstanding the considerations of general public benefit by reduction of expense of carriage, increased value of land, &c., where there was a less traffic than 100 tons or 200 bandy loads per day. If the traffic much exceeded this, the canal would in this respect have a decided advantage over a rail-road; for if the traffic was as great as 200 tons per day, or 60,000 tons per annum, then at half the rate of carriage on the common roads the returns would be nearly 4,000 rupees (£400) per mile, and deducting 250 rupees (£25) for the expense of conveyance at 4 a. (one-fifth of a penny) per mile per ton, and 475 rupees (£47. 10s.) for repairs at 5 per cent., the net returns are 3,275 rupees (£327. 10s.) or 85 per cent. upon the first cost; or, if only 15 per cent. interest is demanded, the tolls might be reduced to 4 a. (2d.) per ton per mile, being one-fourth of the present rate, and so in proportion if the traffic was still greater. If it was a rail-road, the deductions for the expense of conveyance and repairs would be 250 rupees (£75), and 440 rupees (£44); these sums taken from the 4,000 rupees (£400) the gross returns as mentioned above, would leave 2,610 rupees (£261), or 65 per cent. upon the first cost: or, limiting the interest to 15 per cent., the tolls must be 4 annas per ton per mile, or one-third of the ordinary expense of carriage.

The expense of repairs has here been estimated at five per cent. on both kinds of works; in England this is reckoned to be less on a rail-road than on a canal; but as in India the rail-roads are inferior, while earth-work and masonry are cheaper, it is probable that this would make the annual expense equal.

As to the difficulties that would be met with in works of this nature in India, they would not be greater than those that have been met with in England, and that they are not such as the Natives would be unable to surmount (or without it, if the nature of the country was explained to them) would not overcome. It is perfectly evident from the vast quantities of earth and stone which have been excavated here before and since the Europeans arrived, and which are now used in the country. A canal would require works which are not required in land-carriage, but these are of a very different nature. Such works as are required are drawn by animals, and the simplest works that can be executed in the country are much more cheap than the various works now used in land-carriage. The expense of a canal of 20 miles in length would probably require a total of 100 million cubic feet of water to supply the loss by

* That is, that it would cost as much to carry a ton of goods as much as on a rail-road or on a common road.

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continued

Considerations
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centre of the same district; fourth, those of the Ambravatty, which skirts the south-east part of the same district; and fifth, the line from near the town of Coimbatore to the Western Canal.

The first line follows the course of the River Cauvery, which is made use of for the conveyance of goods at present, but it has sufficient water in it only for short and uncertain periods, and goods are only conveyed down the stream, it is too rapid, and the deep channel winds too much for tracking vessels up it. There are in this line peculiar facilities for a rail-road, there being an almost uninterrupted embankment by the side of the river from Cauverypatam, on the coast of Tanjore, nearly to Caroor, in the province of Coimbatore, a distance of 150 miles. The embankment would require but little labour to prepare it for laying rails, and there would be very few bridges required, so that the expense of a rail-road on this line would be little more than the cost of the rails and the laying them. On this line the cloths, cotton, and saltpetre of Coimbatore, and the grain of Trichinopoly and Tanjore, might be conveyed to the coast, and salt would be taken from the coast to the interior. The latter article would doubtless be brought into the interior in great quantities if the expense of carriage was materially reduced. The carriage of a ton of salt from the coast to Coimbatore costs at present about twenty-five rupees, the increased consumption of salt would both increase the revenue and promote the general health and comfort of the people. There must also be a considerable traffic between the coast and the two large towns of Combaconum and Trichinopoly (each of them, as above stated, containing 200,000 inhabitants) in various commodities, and also between them and the interior.

The second line is in the province of Coimbatore, the most flourishing and populous of the dry grain districts of the Madras Presidency. There is a chain of canals of irrigation running parallel with the rivers Bhowany and Cauvery, which form, excepting some intervals, a line of water communication about 100 miles in length. They are from fifteen to twenty-five yards broad, and from six to nine feet deep. In their present state they would be of little use for the conveyance of goods, as each channel extends only about fifty miles, and they are full of water only during a part of the year. In order to unite them into one line, cuts must be made from the beginning of one to the end of another, with a considerable number of locks in them, for the fall of the country thereabouts is very considerable. This alone would render them available during a portion of the year; but to render them capable of containing water throughout the year, a great deal of fresh embanking and many additional locks would be required, for they have a declivity of about five feet per mile throughout their course, which must be divided into separate levels, by means of locks, to make them navigable at all times. There would also be some cutting necessary to straiten them in particular places, for their course is exceedingly devious. Perhaps about 500 feet of locking would be necessary in all which, at 300 rupees per foot, would cost 1½ lacs of rupees, and this would be the principal part of the expense. Such a sum would be very trifling, compared with the advantages of such a length of water communication, if the traffic on it was at all considerable. No water would be wasted in this project.

The third line crosses the district from near Caroor, on the east side, to the Neilgherry Mountains: the works necessary to complete this line are similar to those last mentioned.

The fourth line extends from Caroor to the foot of the Delhi Mountains, which bound the province on the south, near where the rivers that flow into the sea on the west coast take their rise, and with which they might be connected by new cuts.

The fifth line is along the course of the Paulaur and Penang River, from the foot of the Delhi Mountains to the sea: this river must be rendered navigable by embanking and locking. This last would be a most valuable line of water communication, uniting the province of Coimbatore with the west coast. It is very probable that, if anything of this kind was to be undertaken, this would be the best line for the first experiment, but

if it would answer as a separate work it would certainly be much more profitable, as forming part of a longer line.

The first, second, and fifth of these lines would together form a very complete project, crossing the Peninsula from sea to sea, and passing through the largest towns and the most populous and prosperous districts of South India.

From the data above mentioned a rough estimate may be formed of the expense of this work, as follows: 150 miles of rails to be laid along the embankment of the Cauvery from Cauverypatam to Caroor at 8,000 rupees per mile, twelve lacs of rupees; 200 miles of river and irrigating channels to be rendered navigable from Caroor to Penang at 7,000 rupees per mile, fourteen lacs; total twenty-six lacs.* There are no data by which to judge of the probable amount of traffic on this line, but this might be estimated with sufficient accuracy, after making minute inquiries on the spot among the European and Native Government servants and merchants. This is one of the great lines pointed out by Major De Havilland in his report upon inland navigation.

Having so far considered the subject of permanent rail-roads, &c., it remains to be examined what benefit may arise from the construction of temporary works of this nature to diminish the labour in particular public buildings, &c. To judge of this a comparison should first be made between the prices of carriage in England and India, making allowance for the difference in the value of money in the two countries: perhaps about one-half of all the money expended in the Tank department in India, or about four or five lacs of rupees annually, is for the removal of earth in excavations and embankments, and therefore the comparison will best be made in the prices of that kind of work. The usual price, when the earth is to be raised fifteen or twenty feet, and carried thirty or forty yards, is one anna or 1½d per yard; the same work is executed in England, allowing for the contractor's profit, at 4d. or 5d. at the most, that is, at three times the price paid in India, while the daily wages of similar classes of labourers in the two countries is about in the proportion of twelve to one, so that supposing a native of India does only half of the work performed by an European, the price in India is double that in England, solely in consequence of the disadvantageous way in which it is performed. This is an example taken in the least favourable circumstances, viz. where the distance to which the earth is to be carried is small, for in greater distances the difference is greatly increased; thus in one case the contract price of earth to be conveyed 900 yards was only 4½d per yard, which in India could not have been done for less than 6d. per yard, which is four times as dear, allowing for the different rate of wages. This is not owing to the want of complicated machinery, or great science, but to the neglect of very simple means. A tank digger in India removes all the earth by baskets full, carried on his head, containing from 10lbs. to 50lbs.; in England it is removed either by wheel-barrow containing 300lbs. or 350lbs., or by waggons running upon rails, containing from 2,000lbs. to 3,000lbs., and drawn by a horse or pushed by men. In the first case one man does the work of six or seven, and in the last of forty or fifty; or one bullock, at five rupees a month, would do the work of fifty men at 1 rupee per month per head. The rails are generally of wrought iron, so that they are nearly as valuable after being used for a long time in this way, as at first; and they are laid in rough wooden sleepers at a very trifling expense. Their first cost is about £15 per 100 yards, so that their expense may be reckoned at £3 or thirty rupees per annum, allowing for interest and wear; the waggons cost about £6 each, but would of course cost less in India. Where the quantity of earth to be removed was very small, wheel barrows would answer best; but where it was greater, rails and waggons would be found cheapest. It is perfectly absurd that large sums should be annually wasted, which might all be saved by the adoption of expedients that are as well known as those that they

* Supposing the expense to be twenty-six lacs, the daily traffic should be not less than sixty tons, which would allow it a return of fifteen per cent. clear upon the first cost, and there would be a saving to the public of one anna upon every ton conveyed a mile, or four lacs of rupees per annum upon the whole line.

APPENDIX,
No. 24.

continued.

Considerations
relative to
the applicability of
Canals and
Rail roads to
India

they ought to supersede. What would be said if men were employed carrying earth on their heads in baskets in England; and why should it not be equally ridiculous and absurd in India? It may be imagined that some difficulty might be experienced in getting the natives of India to use barrows; but this has been already tried in a work in the Neilgherries, where not the slightest objection was made to the use of them, and after a few hours' practice they preferred them greatly to baskets.

The bulwark at Madras, constructed about ten years ago, was one of those works in which the use of rails would have caused a prodigious saving. It was composed of large loose stones, and extending nearly two miles along the beach. There were perhaps 500,000 tons of stones in it, and they were brought from a distance of about eight miles; probably the carriage of them cost about five lacs of rupees. Now the construction of a perfect rail-road on this line would have cost about 70,000 rupees according to the data above mentioned, and reckoning the expense of waggons and repairs for three years at 50,000 rupees, there would be an expenditure of 1,20,000 rupees, exclusive of the expense of conveyance. The difference of level between the place from which the stones were brought and the beach at Madras gives a rise of about one in 350; and it will appear by the calculation* given below, that a horse could have brought down twenty-two tons of stones, and have taken back the empty waggons once a-day, and reckoning the horse and his driver cost one rupee per day, 500,000 tons might have been brought down for 22,700 rupees. Thus the expense of constructing the rail-road and conveying the stones would have been 1,40,000 rupees; to which may be added the cost of twenty horses at 500 rupees, 10,000 rupees, making a total of 1,50,000 rupees, from which should be deducted the value of the rails after the work was completed, which would be about 40,000 rupees, leaving the sum of 1,10,000 rupees for the ultimate expense of carriage, instead of 5,00,000, which is supposed to have been the amount really expended, showing a saving of 3,90,000 rupees. This is a case which is not likely to occur again,† but it is a good example of the advantage that might be gained by adopting the commonest expedients used in England.

It seems very advisable to send out a small quantity of rails and waggon wheels, to be ready for any of the works that are constantly executing in the Tank department. About 1,000 yards of light rails, such as are used for temporary purposes in England, and wheels for forty railway waggons, might be sent out for about £250.‡ The rails should be plain square bars, and would cost nothing more than other malleable iron, and would always be available for ordinary purposes. Some other things, such as small cast iron cranes and windlasses, &c. should also be kept at Madras, and some of the principal stations up the country, for the general use of the department, by which a great deal of money might be saved.

* The force necessary to draw a given weight on a level rail-road is $\frac{1}{350}$ of that weight, in this case the fall being one in 350, the tendency by gravity for the load to descend of itself would be $\frac{1}{350}$ of its weight, the difference between these two, viz. $\frac{1}{350} - \frac{1}{350} = \frac{1}{350}$ is the force necessary to draw the loads down the plane, and the sum of them, viz. $\frac{1}{350} + \frac{1}{350} = \frac{2}{350}$ the force requisite up the plane. Thus if the waggons weighed 1,500 lbs., and the load 6,000 lbs., the force to draw the loaded waggons would be $\frac{2}{350} \times 7,500 = 16\frac{2}{7}$ lbs., and the force for the empty waggons would be $\frac{1}{350} \times 1,500 = 11\frac{1}{7}$ lbs.; and supposing a horse can exert a force of 110 lbs. for a distance of sixteen miles daily, he could draw eight waggons, which would contain twenty-two tons of stones.

† It has often been proposed to construct either a pier or breakwater, or both, at Madras, for the protection of the shipping, and facilitating the communication over the surf between the shore and the shipping. Should such a work be undertaken, the expense of it would be prodigiously reduced by the rail-road from Madras to the Mount, as above suggested.

‡ Thus 1,000 yards of rail, $1\frac{1}{2}$ in. square, at 18 lbs. per yard, about eight tons, at £9 per ton, £72; and 160 wheels, each two cwt., sixteen tons, at £10 per ton, £160.

APPENDIX. No. 25.

CORRESPONDENCE, Proceedings, &c., respecting STEAM COMMUNICATION with India, and on the Rivers of India.

Steam
Communication
with India,
and on the Rivers
of India

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COAL IN INDIA, Papers respecting ; —Commons' Report 1831, Appendix I. No. 46.

BENGAL.

(1.)—EXTRACT PUBLIC LETTER from Bengal, dated 31st December, 1823.

Para. 108. We solicit the attention of your Honourable Court to the Papers recorded on the Consultations of the annexed dates,* relative to a meeting of the British inhabitants of Calcutta, and the formation of a committee for establishing a communication between England and India by means of steam navigation.

(100. The

(1) Public Letter
from Bengal
31st Dec 1823

* Consultations 30th October, No. 51 to 53; 20th November, No. 20 to 23; 4th December, No. 41 to 43, 11th December, No. 54 and 55, 23d December, No. 58.

APPENDIX,
No 25.

continued.

(1) Public Letter
from Bengal;
31st Dec 1823

109. The committee submitted their proceedings to the Government, and solicited its patronage of the undertaking, and a pecuniary contribution from the public funds.

110. We directed the committee to be informed in reply, that we were fully impressed with the importance and value of the advantages which would result to the State, to the mercantile community, and to individuals, if a communication by means of steam between the mother country and India could be established on a secure, efficient, and permanent footing; and we applauded the public spirit of those gentlemen who had come forward to promote so desirable an object. At the same time it was observed, that we could not relinquish the conviction that the undertaking was fraught with difficulty and danger. It was not unreasonable to apprehend that in unsuccessful attempts to achieve this most arduous enterprize many lives might be lost, or if such extreme calamity should be avoided, the failures might involve severe pecuniary distress, and even tend to the ruin of individuals.

111. Influenced by these considerations, we felt it incumbent upon us not to hold out the encouragement of Government to the *commencement* of an enterprize of which the practicability and ultimate success appeared in our judgment very doubtful. It was signified to the committee, therefore, that we were under the necessity of at present declining to grant to the undertaking that sanction and pecuniary support which they had solicited. It was added, however, that the subject of their representation would be communicated at an early period of time to your Honourable Court, with the recommendation of the Government, that in the event of the project of steam navigation between Great Britain and this country being securely and efficiently established, your Honourable Court would be pleased to bestow such a donation on the successful adventurers, in addition to the contributions which might be raised by the Indian public, as the value and merit of the service might seem to you to deserve.

112. The committee, however, in a subsequent address, afforded such explanation as tended to remove the apprehensions relative to the apparently extreme hazard attendant on the attempt to establish a communication between Great Britain and India, which we justly entertained before the receipt of the committee's satisfactory exposition. We consequently became willing to indulge our cordial disposition to promote an enterprize promising so much benefit to the State and to the community, divested in a great degree of those scruples which a tenderness for the interest of individuals first prompted us to form. We accordingly resolved to place at the disposal of the committee the sum of 20,000 rupees, as a contribution towards the attainment of the object in question, subject however to the following conditions:

113. Adverting to the Act of Parliament which provides that no vessel shall be licensed to proceed to India under 350 tons burthen, we stated our opinion that it would be obviously desirable that the clause in the resolutions inviting vessels not under 300 tons burthen to make the experiment of steam navigation between the mother country and India, should be altered to 350 tons. It had certainly been rumoured that the above restrictive clause in the Act of Parliament was likely to be rescinded, but while it was actually in force there was a manifest irregularity in framing a public procedure inconsistent with its purview. Again, we stated our opinion that the premium should be limited to the sum of 100,000 rupees; should it exceed that amount, the object of permanent advantage would, we observed, be in our judgment liable to be defeated. If the bonus should be on a larger scale, the adventurer who might become entitled to it by the performance of two voyages, might consider himself so amply remunerated as to relinquish all further experiment; thus the public would lose all the benefit of his successful experience; and though the practicability of the communication would be proved, the permanent establishment of it would be left to the doubtful perseverance and unaided exertions of less competent speculators. It was therefore intimated to the committee, that it appeared necessary to guard, if possible, by a special resolution, against the chance of the premium being claimed as the reward of one or two successful enterprizes,

prizes, rather than as a remuneration for the accomplishment of the great object of the committee, a regular and permanent intercourse between the two countries.

114 The committee in reply, after expressing their acknowledgments for the liberality of Government, and their satisfaction at the impression which their explanation relative to the risk of the undertaking had made on our minds, observed that, in providing that steam-vessels should not be of a less burthen than 300 tons, the committee had in view the safety of the vessels, and the accommodation of passengers, by guarding against the possibility of vessels of a smaller size being used after the expected repeal of the Act of Parliament adverted to by us, the enactments of which, so long as they remain in force, could not of course be affected by any resolutions of the committee. They had, however, readily adopted the suggestion of Government on this point, and had resolved to add the following words to the third resolution contained in their proceedings of the 10th ultimo, viz. "Or 300 tons, whilst the Act of Parliament which requires that burthen for British ships proceeding to India shall remain in force."

115 The committee stated that they had no reason to expect that the subscription which had been opened for a bonus or premium, would considerably exceed sicca rupees 1,00,000, at which amount it was originally computed; but in compliance with the further suggestion of Government on this subject, they had agreed that the second resolution passed by the committee on the 10th ultimo should be modified, so as to limit the amount of the premium to the sum of one lac of rupees, leaving any surplus which might be subscribed beyond that sum to be disposed of at a general meeting of the subscribers, for any purposes connected with the object of promoting steam navigation between Great Britain and India, either by a partial reimbursement of expenses incurred in a meritorious though unsuccessful attempt to establish steam packets as proposed, or by any other application of the surplus collected for the purpose above stated, that might appear just and proper.

116. The committee expressed their hope that the resolution to limit the premium to one lac of rupees would sufficiently obviate all risk of its being obtained by any person contemplating the subsequent abandonment of the speculation; for, as far as the case admitted of calculation, after the necessary excess of charge and abatement of profit incident to the commencement of every such undertaking should have been met, there would not remain to the successful candidate such a clear gain as would at all compensate for the relinquishment of an established concern; and, on the other hand, it could never be desired to force the continuance of the attempt if, contrary to all just expectation, it should be found unprofitable, and likely to be attended with permanent loss.

117 The above explanations being satisfactory to us, we issued orders for the payment of the sum of 20,000 rupees to the steam committee.

(2.)—EXTRACT LETTER (Public Department) from the Court of Directors to the Governor-general in Council at *Bengal*, dated 11th May 1825.

50. We highly applaud the zeal and public spirit which have been manifested by the originators and promoters of this subscription, and we sincerely hope that it may be attended with the desired success.

51. The mode which they have selected for encouraging enterprising persons to make the attempt, viz. by offering a premium to the first successful adventurer, appears judicious, and we sanction the donation of 20,000 sicca rupees which you made to the fund.

(2) Letter from
the Court of
Directors to the
Governor-general,
Bengal.
11th May

APPENDIX,
No. 25.
continued

(3) Letter from
H. Prinsep, Esq. to
J. Dart, Esq.,
10th Aug. 1828

(3)—LETTER from H. T. PRINSEP, Esq. to J. DART, Esq., dated 10th August 1828.

Sir :

1. I AM directed by the Right Honourable the Governor-general in Council to forward, for the purpose of being laid before the Honourable Court of Directors, the enclosed copy of a note on the subject of steam navigation, as applicable to the rivers of this country, and of some other papers on the same subject,* which were laid before his Lordship in Council on the 7th instant, together with copies of the orders and instructions issued in consequence, for the purpose of causing an experimental voyage to be made with the Government steamer Hooghly to Allahabad and back.

2. The results of the voyage will be reported to the Honourable Court on the return of the steamer, together with such observations and recommendations on the subject of steam navigation as the Governor general in Council may think proper to lay before the Honourable Court.

I have, &c

(Signed) H. T. PRINSEP,
Secretary

(4) Note on the
introduction of
Steam Navigation
in Bengal

(4).—Note by Mr. Secretary PRINSEP on the introduction of Steam Navigation on the Rivers in *Bengal*, dated 31st July 1828 and P.S. dated 7th August.

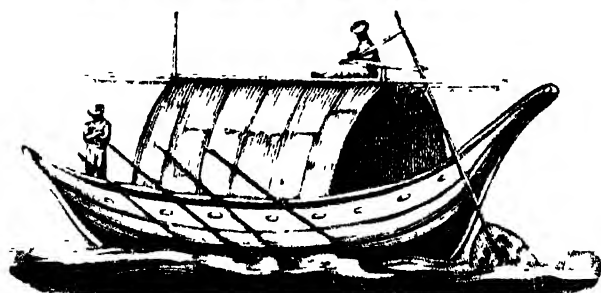
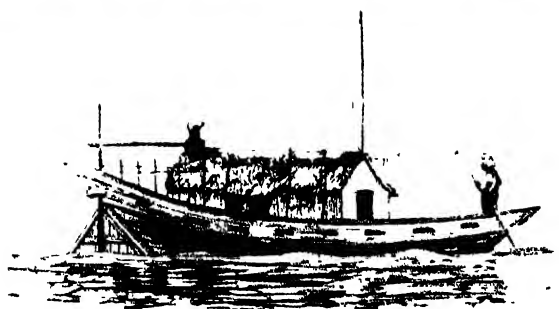
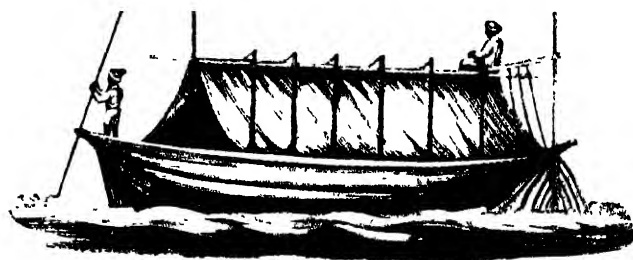
THERE is no river in the world, unless those of China be exceptions, on which there is so large a navigation as on the Ganges and its tributary streams. Major Rennell, writing in 1780, reckoned that no less than 30,000 boatmen found their livelihood from this source, and as that was a time when trade was far less flourishing than at present, when Upper Hindoostan produced little or nothing for external commerce, and its communications with Bengal were much restricted, a time indeed when all India was suffering from misrule, and Hindoostan in particular was a scene of anarchy and violence, it might not be too much perhaps to assume the number of boatmen in the present day to be double that estimate. No attempt has yet been made to take a census of the class, or even to count the number of boats on the different rivers. Every body, however, that has lived on the banks of the great Ganges, has been struck by the constant succession of boats moving up or down, the river never appearing for a minute altogether clear; and as this is nearly the same at all seasons and in all places, it leaves an impression of the extent to which this magnificent stream subministers to the wants of commerce and of the traveller, such as deters the attempt at computation. It is not the Ganges only, as a single stream, that confers these benefits, all the larger rivers that bring down the waters of the northern hills are navigable more or less throughout the year, and almost to the foot of the first range,† these too are sufficiently numerous to sweep the commercial produce of all that tract without its needing any land transportation except to the Ghauts, where it is embarked, and to which the agricultural cattle suffice to convey it. The rivers that flow into the Ganges or Jumna from the south have not the same character, they are formed from mountain torrents, dry for the larger portion of

- * 1. Note by the Secretary, dated 31st July 1828, and P. S., dated 7th August
- 2. Note by Captain Forbes, Engineers, dated 27th July
- 3. Letter from Captain J. H. Johnstone, with an Enclo. are, dated 22d July
- 4. Letter to the Marine Board, dated 7th August
- 5. Letter to Captain J. H. Johnstone, dated 14th August
- 6. Letter to Captain F. Prinsep, Engineers, dated 7th August.
- 7. Letter to Captain C. L. Smith, Engineers, dated 7th August

† The Rangunga and Gurra, in Kauland are comparatively small, but still navigable for more than half the year. The Goomte Chowka and Gogra in Oude; the Raptée Gunduk and Bagmuttee in Gourukpoor and Behar; the Kooser, Mohanudee, and Teesta, and so to the Burhampooter and its branches in Assam; and the Soorma and Megna, which flow from Kuchar through Sylhet, are navigable throughout the year.

the year, and even the Soane, the largest of them, is not navigable much above Daoodpoor, which is but twenty miles from its confluence with the Ganges. The rivers of Bundelkund and of Malwa have rocky beds and frequent waterfalls, so that the Chumbul, which is the largest, is scarcely serviceable for navigation at but a very short distance from the point where it falls into the Jumna. Taking the limit of the Ganges and Jumna to the west and south in Hindoostan, and the Burhampootur and Megna to the east, the country completely intersected with navigable rivers, and within which both trade and travel are mainly carried on by water, may be computed to cover an area of not less than forty square degrees.

The boats used in this large space are very various, and there is a distinctive character in their build, corresponding with the local circumstances of the districts where they are constructed. The patella or baggage boat of Hindoostan is of salwood, clinker built, flat bottomed and scarcely more manageable than a punt, yet through its great breadth it has of all the smallest draught of water and is therefore admirably calculated to bring down the cotton and other products of Hindoostan, which need little better than a dry and secure raft to float them down the stream.



The oolak or common baggage boat of the Hooghly river and of Central Bengal has a sharp bow and rounded smooth side; in tracking or sailing before the wind it has no equal, besides being tolerably manageable with the oar in smooth water. The dacca pulwar is much more weatherly, and though like the rest flat at bottom, that is without keel, on account of the frequent shallows of the navigation, it is altogether the swiftest and most handy boat in use for the purposes of commerce. Besides these principal classes there are boats of a particular construction used for the conveyance of particular articles, as the salt boats, the wood boats of the Sunderbund, the light boats which convey the bectel leaf to the cities, and various others which it is beyond the purpose of this paper to recapitulate. For the

accommodation of travellers the same boats are ordinarily used as for merchandize. A native traveller, according to his substance and the degree of accommodation he requires, fits out a dingee, or a panswee, or a pulwar, or an oolak; if more wealthy, he takes these for his baggage and attendants, and provides a budgerow or ketch-rigged pinnace of European build besides for his personal accommodation. European public officers proceeding to their stations by water have ordinarily boats of various descriptions, according to the quantity of baggage and of establishment with which they travel; a civil officer of standing seldom has less than five or six, and sometimes he has as many as fifteen, when the materials of house-keeping, with horses and equipages, accompany his route.

APPENDIX,
No. 25.
continued

(4.) Note by Mr
Secretary Prinsep
on the introduction
of Steam
Navigation in
Bengal

The hire of each description of vessel is noted below,* with the time allowed for a voyage to Allahabad, that is, the period for which it is necessary to engage the boats in order to make such a journey.

These details may be deemed superfluous, but it is essential, before entering on the consideration of the benefits to be derived from the substitution of another process of navigation, that the modes in use should be brought distinctly under view.

It will be seen from the above short notice, that the navigation up the stream is dilatory, and as a necessary consequence expensive. It is also not free from danger. The rate of insurance for merchandize from Calcutta to Allahabad is the same as that upon a voyage to England.† Down the stream there is of course no delay and little expense, but the danger is at least equal.

The principal sources of danger are, first, the rapidity of the current, which, averaging five miles per hour in the rains, is increased to six and seven, and even eight, at places where the stream is checked by rocks, as at Moongeer Colgong (Kuhulgaon) and Janggeera; or by hard konkur banks, as at Poontee and various other places; or by the buildings and artificial defences of a city or large town, as at Patna and Rajmool. If the wind is strong and blows the same way with the stream, a boat coming down is driven with such force by the united action of it and the current, as to be stayed in and sunk on striking against the rock or bank, or against some other boat, if there be a fleet. If, again, the wind blow against the stream, it raises a considerable sea, and the native boats attempting to sail up find a difficulty of steering, and sometimes meeting an eddy, or through the mere effect of the waves on the rudder, are turned sharp round and upset; or, as is by no means uncommon when too heavily laden, fill and founder from the mere action of the waves on the bows and gunnel.

The second source of danger is from shallows and concealed sand banks. The manner in which these are formed, and the rapidity with which they shift with every change in the set of the current, preclude the possibility of providing against the danger by a survey, howsoever accurate. As observed by Captain Johnston, an experienced eye can generally tell where the deepest channel is to be found by the appearance and strength of the current.‡ In dropping down the stream the manjees of course attempt to keep this; but even the most experienced are sometimes deceived, and a wind on the beam will drive them on a sandbank before they are aware of the existence of danger. The river rises and falls sometimes very suddenly, and after striking on a bank, if the boat cannot quickly extricate itself, there is some risk of the water falling. In sailing up (and the same course would be followed by steamers) the centre of the main channel is always avoided, for the strongest wind barely suffices to enable a boat to stem it; the object is to seek that part of the stream where the water is comparatively slack, and this

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				For voyage to Allahabad 2 months and 15 days	
				Rs. 1s to 20	1,200 or 1,400
* Dacca Pinnace, first class, per diem	12 to 14	900 or 1,000
— lowest class	..	..	..
Budgerow, first class	..	..	..		650
— last class	..	..	..		450
Patella of 500 maunds	..	..	..		150
Oolak, of ditto	..	..	..		150
Pulwar, ditto	..	..	..		150

† River Insurance Company's rates to Allahabad, 34 per cent., to London from 3 to 4 per cent, according to circumstances.

‡ Mr May, who has filled the situation of Superintendent of Rivers for nearly ten years, is now at my suggestion making up a map showing the course of the Great Ganges from the head of the Bhagureetee to that of the Jolmjee, as it has varied each year of his examination, &c. &c., and as compared with Major Rennell's Survey of 1780 and Colonel Colebrooke's of 1793. The map, with this gentleman's observations on it, will be a valuable addition to Major Rennell's ingenious essay upon this subject.



is found always on the shelving side, up which the vessel makes its way, crossing over immediately when in the alternation of the river's course the shelving bank becomes again precipitous, and the current strong. Without local pilots (and fishermen may

generally be found for the duty) it would scarcely be possible in such a navigation to avoid frequently striking on banks, but in proceeding up with boats of the common description there is little danger in this. The crews jump into the water and commonly lift the boat or pinnace off in a few minutes. Thirdly, the falling in of the banks is a more serious danger than would readily be supposed; for in tracking up when there is no wind, the boats must sometimes be dragged under a precipitous bank of twenty, thirty, and even fifty and eighty feet perpendicular height, and if this has been undermined or loosened by recent rain, the earth falls in large masses, the wave of which is enough to upset a small boat, and the largest would be sunk if struck by the weight of earth.* It is particularly necessary to be careful of this danger in putting to shore for the night, but even the best selected spots are liable, through a change in the set of the current, or from some protection above being washed away, to be brought suddenly under the operation of this evil. The rapidity with which the loose soil yields under such circumstances defies description, and in a large fleet made fast to the shore half the boats are often cast loose, huddled together, and driven by the current upon those below before any precautions can be taken for their security. A steam vessel never tracking and having the choice always of the two sides of the river (which, without a wind blowing directly up the stream, is not the case with common boats) would be less liable to accidents from this cause than any description of craft now used. Such a vessel might always depend on finding good anchorage for the night.

The fourth and only remaining danger arises from sunken trees, which falling and becoming fixed in sand-banks, present jagged points frequently below the surface of the water, on which boats striking are staved in. A floating tree is less dangerous than a fixed one, for it may generally be seen above water, and if it should strike a boat, the part that first comes in contact with it yields to the shock, and the worst that generally happens is that the tree carries the boat along with it down the stream, until cleared away.

It must be evident that the dangers and difficulties above described cannot be peculiar to the Ganges; the same precisely must be experienced in the Mississippi, which like it is subject to freshes, and like it runs through a long course of low alluvial soil. The rapidity of the current of this river in the height of the freshes, that is in the spring season of Europe, is stated in geographical books at six miles per hour, but in the dry season it is but one and a half and two miles, which is much less than the Ganges, whose lowest rate is three miles. Again, the sources of the Mississippi not being liable to the influence of tropical rains, the rise of that river in its freshes cannot be compared with that of the Ganges, which even at its broadest point, that is at the head of the Jellingee, where, the soil being light on both sides, there is nothing to check or unnaturally swell the tide, is stated by Major Reunell at thirty-two feet of perpendicular height, and the fact is confirmed by subsequent measurements of recent date. I know of no river within the tropics on which steam navigation has been introduced extensively, and none therefore preferable to the Mississippi for comparison with the Ganges, when the possibility of introducing steam navigation in the latter is the question. It would seem that the difficulties, from the above circumstances, and the dangers also of the Ganges, are likely to be greater than in the Mississippi, but not dissimilar in kind, and therefore, considering

* Under the high bank just below Bhagulpoor, Lord Hastings lost fourteen baggage boats at once from this cause, assisted by a squall and strong current, which huddled the boats together.

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No. 25.
continued

(4) Note by Mr
Secretary Prinsep
on the introduction
of Steam
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considering the eminent success with which steam has been introduced in the latter, there is no reason to think they would prove insuperable, nor ought they to be deemed conclusive against an attempt being made to introduce steam here. In the Great Ganges, the simple fact that the river is no where fordable for an elephant below Allahabad in the driest season, is proof enough that there is every where sufficient depth of water for any description of steam-boat, if only the main channel is followed. Major Rennell, indeed, states the average depth of the stream in the driest season at 30 feet; good management and good pilotage therefore, in one word, experience, seems all that is wanted to ensure that a steam-boat shall make a safe and speedy passage up to that station. In what time, with what gain upon boats having only the oar, the sail, and track-rope, is an important point that can only be settled by repeated experiment. Whether it is worth the while of Government to make these experiments, and to incur charges for the purpose, is another branch of the subject that will be discussed presently.

What is stated above leads to the conclusion, that there is nothing in the character and condition of the rivers to prevent an experiment, if not on other accounts inadvisable. Calcutta, indeed, labours under a disadvantage in not being washed by the main stream of the Ganges. In the dry season the communication with the great river by the three channels^{*} that when united form the Hooghly, cannot be depended upon, for the water falls to within a foot of the bed of these channels, closing generally one or two of them altogether, and leaving in the third but a foot or eighteen inches water during the two months of March and April, and in the beginning of May. This circumstance appears to render it indispensable that any experiments that may be made should be commenced immediately, and conducted in the rains, or soon after their close, during the period when there is still sufficient water in these channels for the steam vessels to be used. It is true that if the cold season be preferred for an experiment access to the great river might be found through the Sunderbuns; but for this a long detour would be necessary, making to ordinary boats a difference of at least seven days in the general voyage. Besides, the prevalence of easterly winds during the rains is an advantage which more than compensates for the increased celerity of the stream; and the inundation and plenty of water, gives the means of making frequent short cuts to avoid difficult places, and greatly expedites the period of arrival. The same reasons, indeed, which induce individuals to prefer this season for the voyage up, point it out for the time of an experimental steam voyage, should such be determined upon.

I shall now proceed to inquire with a view to what objects Government should entertain the desire of eventually introducing steam navigation; putting out of view the commercial transactions of the Company, with which we of course have nothing to do, the river navigation is used at present for the following Government purposes:

First. To transport treasure. 38 lacs of rupees of the Gwalior loan were last year brought by water from Agra to Calcutta, and fortunately arrived safe, but instances of the boats sinking and of the loss of treasure are by no means rare occurrences, and as the treasure has to be conveyed in the common native boats above described, it may be assumed liable to the ordinary risk represented by the rates of insurance stated. But for the transport of treasure under the present system, a very large proportionate escort is always required. The 38 lacs of rupees above adverted to were brought down by an entire battalion, so as to employ a large fleet of boats, and the same, or nearly so, would have been the case if a similar amount of treasure had been sent up. For the protection of any amount of treasure that a steamer might be able to carry, a common havildar's guard added to the crew, commander, and passengers would be ample escort; for no band of robbers would follow it or waylay it, as they could not know where the steamer would put into for the night, or what progress it might make each day.

The

* 1 Bhagiruttee or Cossimbazar river, 2 Jellinghee; 3 Mata Bhanga.

The treasure of Chittagong and Balasore is now always brought to Calcutta in sea-going steamers, without any guard in addition to the crew, and by arming a river steamer with swivels, and enjoining that it should always lay at anchor by night at a considerable distance from the shore, there can be no doubt that equal security might be provided for an up-river voyage, even without a guard; but it will of course be preferable to have one.

If treasure can be carried by steam more rapidly than by land, as well as more securely, all native and other mercantile remittances would be made by the Government steamers; and should experiment show the plan to be practicable, the item might be made a source of emolument in this way, as well as through the saving of the boats, batta, and other allowances to the escorts now employed in the transport of public treasure. But there are other ways in which the plan, if completely successful, would be made to answer: a mint is provided at Benares to coin bullion for merchants there, and also to re-coin the bad and short-weight rupees received by collectors in payment of the land revenue. If Government could depend on the means of forwarding treasure from Benares for coinage in Calcutta, and of receiving coin back in exchange in twenty days, the necessity for the mint and its establishment would be entirely superseded, and all that would be required would be an assay master attached to the collector's treasury at the station, upon whose report bullion should be received.

It is not possible to say what might be the saving and what the gain upon the complete establishment of steam navigation for the transport of treasure up and down the rivers: the object is surely sufficiently important to warrant an experiment, in order to determine how far the navigation is practicable for vessels of this description, and within what period the voyage can be performed.

Secondly. Every King's or Company's officer proceeding up the country to join his regiment, or otherwise travelling by water on duty, receives a monthly boat allowance at the rates given below,* and for a journey to Allahabad the period authorized is three months. Now, though it would of course be out of the question to deprive the higher grades of officers of allowances which have been fixed on a scale enabling them to carry up

			Per Annum		Months Days	
			Rs.	930	For Dinapore to Sunderbans, in March and April	
* Colonel	..	..	..	630	..	15
Lieutenant-colonel	..	..	..	360	..	1
Major and Head Surgeon	..	..	..	180	..	7½
Captain Paymaster &c	..	..	..	100	..	3
Subaltern	..	..	..	80	..	—
Cadet	..	..	..	70	..	—
Conductor and Quartermaster	..	..	..	50	..	—
Medical Pupils	..	..	..	—	..	—
			Months Days			
For Agra	..	..	6	—	..	15
— Allahabad	..	..	3	—	..	—
— Azimghur	..	..	3	—	..	15
— Baraut	..	..	4	—	..	15
— Bareilly	..	..	4	15	..	—
— Benares	..	..	2	15	..	15
— Berhampore	..	..	1	—	..	—
— Bundelkund	..	..	3	20	..	15
— Burragong	..	..	2	7½	..	5
— Buxar	..	..	2	7½	..	15
— Cawnpore	..	..	3	15	..	7½
— Chittagong	..	..	2	—	..	—
— Chunar	..	..	2	15	..	15
— Dacca	..	..	1	—	..	7½
— Dahanow	..	..	3	7½	..	—
— Delhi	..	..	7	15	..	15
— Dinapore	..	..	2	—	..	—
— Dumraon	..	..	—	—	..	—
— Ferozpur	..	..	—	—	..	—
— Gwalior	..	..	—	—	..	—
— Haidarabad	..	..	—	—	..	—
— Jubbulpore	..	..	—	—	..	—
— Lucknow	..	..	—	—	..	—
— Meerut	..	..	—	—	..	—
— Muzapore	..	..	—	—	..	—
— Monghyr	..	..	—	—	..	—
— Moradabad	..	..	—	—	..	—
— Muttra	..	..	—	—	..	—
— Patna	..	..	—	—	..	—
— Peshawar	..	..	—	—	..	—
— Rajmahal	..	..	—	—	..	—
— Rangoon	..	..	—	—	..	—
— Secrora	..	..	—	—	..	—
— Shahabad	—	—	..	—
— Sheikhpura	—	—	..	—
— Settapora	—	—	..	—
— Sultanpore (Benares)	—	—	..	—
— Sultanpore (Oude)	—	—	..	—

APPENDIX,
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continued.

(A.) Note by Mr
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up their families and baggage; the junior officers would prefer to have a speedy passage found them by Government on board a steamer, and in the case of cadets and others recently arrived, it would be a great advantage to have the means of forwarding them by such a conveyance: the Government would thus gain so much the more of their services in lieu of the time being wasted unprofitably in the progress to their corps, besides the positive saving in expense, through diminution of the period occupied in the voyage, and by accommodating several in a single vessel. It is true that the present river steamers of Government are not calculated to carry many passengers, but if it be established by experiment made with them that the voyage to Allahabad can be performed in a fortnight or twenty days, the construction of others, or the adaptation of the present vessels to the purpose would follow in due course; the object is certainly well worth the cost of an experiment to ascertain within what time the voyage can be made by steam.

The sums annually paid by Government as boat allowance to officers are noted below,* and from the largeness of the amount an estimate may be formed of the diminution of charge that would result from providing a conveyance to Allahabad for the juniors, who are of course the most numerous, and whose boat allowance forms the bulk of the expenditure.

Thirdly. Analogous to the above is the transport of European troops and stores to the Western Provinces, which is always now done by water: the boat hire paid on this account in the years 1825-26 and 1826-27, appears on reference to the military accountant to have amounted to no less than £572,422 in the former, and £456,922 in the latter year †. The allowance is stated by Captain Johnson to be fifty mounds per man in the common river boats. Now, with steam vessels fitted out for the purpose, and making the passage up and down to Allahabad, say in one month, a regiment would be transported in successive trips with a security, comfort, and healthiness to the men, much superior to any thing obtained under the present system. In the case of stores, the knowledge that anything required on emergency could be furnished in a month, would materially diminish the necessity of keeping the depôts always so fully supplied. The whole quantity of stores required for the different stations of the army could not probably be conveyed to Allahabad by steam, but all the most valuable and most important might, which would be a considerable gain. Whether it is worth the while of Government to make an attempt to apply steam navigation to such purposes, must depend on the result of experiments to ascertain the period within which the voyage to Allahabad, and eventually to Cawnpore, can be made by such agency: if the result shall justify expectation in this respect, it will then be a question to which of the above objects to apply the improvement first, and in what form to extend it.

Fourthly. Although the voyage by steam can never be made with sufficient rapidity to be applied to the conveyance of the letter mails or dawks, it may yet be exceedingly serviceable in carrying the bhangee or parcel dawk, which is now a large, and is likely to be an increasing concern. Upon a rough estimate obtained from the Postmaster-general, it appears that the monthly receipt at the Calcutta post-office for bhangee postage

	1823-24.	1824-25.	1825-26.	1826-27.
Boat Allowance				
To King's Officers	Rupres 52,500	57,579	47,754	74,044
To Company's ditto	1,06,765	6,73,151	2,23,615	3,10,260

† The following statement is from the Military Auditor general's Office

Charge of sending an European regiment to Cawnpore by water	Commissioned officers, boat allowance, assuming the number of officers now serving with His Majesty's 31st Foot ..	Rs. 23,310
Donnage for 1,000 rank and file, 120 women 100 children, and 100 followers, also for hospital and commissariat	.. .. .	22,677

Total Charge of Transport by Water Rs 45,987

postage,* being taken at 11,047 rupees, which is the amount realized in June upon eight dispatches, the proportion that would be assignable to steam, supposing all the bhangees up the river as far as Allahabad to be conveyed in that manner, would be about 7,000 rupees. The saving of establishment that would result would be seven rupees 899 per mensem, supposing the communication to be sufficiently frequent to warrant the exclusive use of steam for this purpose; but as at present there are eight bhangee mails dispatched per mensem, and Government have as yet but two steamers adapted to river navigation, this saving cannot be reckoned upon, except as a prospective advantage. Nevertheless, if experiment shall prove that the passage to Allahabad can be made as rapidly by water as the bhangee mails travel by land, a separate mail might be established in the first instance by such vessels, and the great security of the method of conveyance, the immunity from theft or robbery, and from injury from weather or accident of any kind, added to the power of carrying larger parcels, must ensure an increased resort to this means of transport, and thence an increased revenue. The application of steam navigation to this purpose must depend of course on the time within which the passage to Allahabad can be made by steam. Bhangee parcels would require to be conveyed to that station in about fifteen days, before such a mode of conveyance could be admitted to supersede the present system; for the bhangee mails carried by relays of men arrive generally within that time, though not with any regularity.

Fifthly. There is at present an establishment of four expensive boats kept up for the transport of stamped paper to the different district stations. The majority of these are accessible by steamers, and the whole, or the greater part of this establishment, would be saved by employing steamers instead to carry the stamps. The cost of the four boats was about 16,000 rupees, and the permanent charge of each per mensem is rupees 118, or for the four, rupees 472. Stationery and medical stores are similarly articles of a description that might at once be sent by the steamers to all the river stations by which a very considerable present saving would be made in the charge of their conveyance by the present plan, or rather the amount of this charge might be transferred to meet in part the expense of the steamers which did the work. These objects are of secondary importance only; still they afford so many additional motives for making a sufficient number of experimental voyages to enable Government to ascertain within what period the passage can be assured, and they help to show that, if the experiments are successful, there are abundance of useful purposes which steamers may be made to answer, as well immediate as prospective.

With respect to the description of steam-vessels best adapted for river navigation, with reference to the different purposes for which Government would eventually require them, the subject is foreign to the immediate purpose of this note. Captain Forbes has, however, furnished a Memorandum, which is annexed, containing some valuable hints, and discussing the question with his usual judgment and professional skill. To that paper the members of Government will of course refer when the question shall be—in what manner to apply steam to any of the purposes required; but preliminary to this is the ascertainment by experiment whether through the application of steam the full desired benefit, or what proportion of it, can be expected. For such experiments the present river steamers of Government appear amply sufficient. Improvements may be made in future vessels, calculated to increase speed or diminish the draught of water, or to extend and improve

Bhangee Establishments to River Stations.							Stages	Men.	Pay
									Rupees.
From Calcutta to Moorshedabad	..	..	..	..	..	..	16	31	12½
From Calcutta to Allahabad	..	..	..	..	..	..	55	109	73½
Akoora to Ghazee pore	3	6	21
Bhaugulpore to Mirzapore	5	5	17
							79	231	89½

APPENDIX,
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continued

(4) Note on the
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improve the accommodation afforded. Every thing of the kind would of course be so much gain; and possessing a perfect knowledge of the capacity, draught, and power of the boats we have, through the result of experiments actually made with them, the effect of each improvement may at once be calculated. The most important point of all is to ascertain as nearly as can be done what precise gain of time over vessels ordinarily used for the transport of goods, treasure, public stores, or travellers, can be reckoned upon with a steam-vessel of a given power and draught, and likewise whether the navigation of the Ganges presents such difficulties as must prevent or discourage the hope of ever successfully applying steam.

The Hooghly and Burhampootur have been built especially for river navigation, and the whole cost of their build will be thrown away if the desired experiments be not made with them. Their dimensions, power of engine, and draught of water are given below,* together with the more important particular, *viz.* their capacity for carrying their own fuel. Assuming the consumption at 100 maunds of coals per day of twelve hours, which I am assured is an outside calculation, six or seven days is the interval at which fresh relays of coal would be indispensable, and the question arises at what distances to make the provision. For the first experiments the safe side must of course be taken, and three if not four relays should be provided for the voyage to Allahabad, assuming the distance to be about 640 miles. This allows 213 miles for each coal station at three, and 160 at four divisions. To accomplish these distances in six or seven days, a rate of from twenty-five to thirty-five miles per day of twelve hours must be reckoned upon against the current. These are distances which the river craft continually exceed when they have a fair wind; and assuming the steam-engine to be in place of such a wind, giving as it must a choice at all times of the most favourable channels and parts of the river for upward navigation, it would be to assume a necessary failure to take a shorter distance for the daily progress. For three relays at a distance of about 200 miles from each other, depots of coal would be required at Rajmuhul, Dinapoor, Benares, and at Allahabad for the return voyage: 800 maunds at each station is an abundant supply. The return voyage would not probably occupy much more than seven days, and the necessity of using at most but half the steam power would allow the seven days' provision to be husbanded for at least twelve days' use if necessary. If four stations be deemed indispensable, Moorshedabad, Moongeer, Chupra, and Benares would seem the most appropriate, or, to relieve the length of the first stage to Rajmuhul, a boat-load of coals might be forwarded to Cutwa, to enable the steamer to proceed from thence with a full supply.

The Diana steamer, which was so useful in the Burmese war, carried the British Resident with his suite up to Unrapoora on the Irrawaddy within a month, during the September freshes, stoppages included, and with the disadvantage of using wood instead of coal fuel. The journey is as compared with the Ganges to the height of the city of Benares. There is unfortunately no record of the progress the Diana made *per diem* against the stream of the Irrawaddy, nor of the stations at which the depôts of fuel were established for that voyage;† otherwise that expedition might be assumed to afford useful

	Power of Engine.	Length on Deck.	Breadth.	Tonnage by Mea- surement	Draught of Water, full laden with Coals, &c.	Number of Hours Fuel. Country Coal.	Consumption per Hour.
	Horse Power.	Feet			Feet		Mds lbs
Hooghly ..	2 of 25	105 2	18	158	4	84	8 25 or 709
Burhampootur	2 of 25	104 4	18	156			8 25 or 709

* Doctor Stewart, who accompanied Doctor Crawford as surgeon, and to whom I have caused application to be made on the subject, writes, that nobody kept a journal, "but in going up we experienced no difficulty whatever

useful data for calculation in respect to the proposed experiments, for the Irrawaddy, except that it is not so large and has consequently less depth of water than the main stream of the Ganges, must be similar in all other respects to this latter river; and it is worthy of remark that the draught of water of the Diana exceeds that of either of the new river steamers lately built, by a foot and a half or two feet, so that the successful trip she made on the occasion alluded to is very encouraging to an experiment with these. On her return, indeed, I have been informed that, owing to the subsiding of the inundation and the general shallowness of the river, the Diana had very great difficulty in making the voyage, and that on one occasion she stuck so firmly on a sand bank as not to be extricated without landing every thing of weight, and obtaining the aid of several hundred of the Burmese inhabitants in the neighbourhood to lift her off. This, however, occurred in the month of December; and considering the difference in the draught of water of the new steamers, the circumstance should be no argument against dispatching them to Allahabad on the experimental voyage proposed, more especially at the present season of the year.

In addition to the dispatching of coal, it will be necessary for the success of the proposed experiments as well to secure the services of an experienced manjee, well acquainted with the river (which is by no means difficult, for there are many men whose whole life has been spent in making voyages up and down), as to provide local pilots at all the different points. Precautions of this kind can always be taken by notice beforehand to the local functionaries and police daroghas; and in case of any unforeseen emergency, these will readily provide any extra assistance that might be necessary to extricate the vessel and save the property of the state.

With respect to the expense: in an experimental voyage of this description it is only of importance to notice the item for the calculation of future results. Exclusive of the ordinary establishment and wear and tear of the steamer, the charge is confined to the coal and contingent expenses. For the voyage up and down at 800 maunds for each station, as above assumed, the total expenditure of coal, supposing the vessel to arrive always with none left of the preceding supply, and supposing also the entire supply sent to Allahabad to be consumed in the voyage down, would be 1,000 maunds. The best coal is now put on board at Calcutta for seven annas a maund: unfortunately none is to be found at any point of the voyage except such as may be forwarded from Calcutta. This is certainly a great drawback, and perhaps were the banks of the Soane explored, a coal similar to that found near the Dumoodur in Burdwan might be discovered, for there is no great dissimilarity in the character of the country through which the two rivers run. At present, however, the cost of coals for the depôts must be taken at the Calcutta price *plus* the charge of conveyance to the desired station. At Allahabad coal has been delivered to Government on contract at a rupee per maund: taking twelve annas, therefore, as the medium charge per maund for all the stations, the total expense of the voyage would 3,000 rupees for coal. For pilots, additional crew, and contingencies 500 rupees more might be added, making 3,500 rupees the total charge to be placed to the account of the experiment. The risk, wear and tear, and ordinary charges of the vessels dispatched must of course also enter into any calculation that may hereafter be made for the purpose of showing that steam navigation can or cannot be applied beneficially to any given public object, but such items are foreign to the determination whether an experiment shall be made or not. The extra expense that it will occasion to Government is all that has at present to be considered; in other words, whether it is worth 3,500 rupees to ascertain with what gain in time, over the ordinary boats of the country, steam navigation can be introduced up to the station of Allahabad. I have named this station, and confined my observations to it, because

in September (except for supplies of fuel) and travelled generally thirty miles a day. Coming down, the river had fallen and several banks had shifted, so that we always had the jolly-boat a-head, and often from ignorance of the channel had to kedge along; when we could procure a pilot to point out the channel from one town to another, we got on very well, we drew never less than six feet."

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(4) Note on the
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because immediately beyond the navigation is exceedingly difficult. For the five miles between the fort of Allahabad and the village of Popamow the river falls in a race over loose sand with a velocity not equalled in any other part of the stream, and the nature of the soil keeps it perpetually shallow, more especially during the rains, when the width is very great. This is decidedly the most dangerous and difficult point of the entire navigation of the Ganges; and it is customary for travellers to disembark, and for boats with merchandize to lighten their draught before they encounter its dangers. The river steamers now belonging to Government have neither sufficient power, nor is their draught sufficiently small to be able to make a certain passage of this rapid; consequently it is best not to attempt it, or at least not to include it in the calculations of the first experiment. The cause of steam navigation will suffer nothing by being first considered with reference to the result that may be ascertained by an experimental voyage to Allahabad. Cawnpore being the principal station of the army of Hindoostan, is doubtless a most important place to be reached by steam: it is 120 miles, or one coal relay, beyond Allahabad; and if the latter station can be brought within the influence of the improved system, its eventual extension to Cawnpore would soon follow.

To conduct satisfactorily an experimental voyage of the kind proposed requires something quite distinct from nautical skill: indeed for the mere command of the vessel in the daily progress, a manjee would be the most efficient captain; Government will require, however, that the route followed should be noted and laid down, that the nature of the difficulties experienced, and the manner in which they are overcome, should be distinctly registered for a warning and instruction to others; and that a particular set of observations should be made in regard to the power of the steam and the strength of the current, and the manner of advancing against the latter, and the fitness of the vessel under all circumstances of current and wind to make way. All these questions require a man of scientific and observing habits, and above all things a person on whose judgment in such matters it would be safe to rely.

(Signed) H. T. PRINSEP, Secretary.

Calcutta, 31st July 1828.

P. S.—I have been reminded that in the above paper, which has been prepared for the information of the Governor-general, agreeably to his command, I have omitted to explain sufficiently for what purposes and with a view to what objects the Hooghly and Burhampootur steamers have been built; and hence that the question is argued as if the matter for Government to decide were purely how to render serviceable vessels which have been constructed at considerable expense, but would be useless unless a mode of employing them experimentally could now be devised. It certainly was far from my purpose to give to the question such a turn; but the two vessels having now been so recently launched, I conceived all that had passed when it was determined to build them was already so fully known and familiar as to render any special advertence to that part of the subject unnecessary. In order to prevent misconstruction, however, and complete the *expose*, the following notice is added of the circumstances under which the two river steamers in question were constructed.

Soon after the conquest of Assam, the difficulties of the navigation of the Burhampootur, from the strength of the current and prevalence of east winds, and the want of any ready means of communication by land with the upper parts of the valley, suggested to Mr. Scott the expediency of applying steam to secure the desired facilities. It was reckoned both that the troops in the valley might be more easily supplied in this manner, and that a great reduction might be made in the number kept up, if through the use of steamers the means were obtained of moving them quickly in every direction. The Secretary in the Secret and Political department brought these circumstances under the notice of Government, in a Note recorded in the Political Proceedings of the 30th September 1825; and it was resolved, with reference to the opinion of Captain Forbes and other intelligent persons cited by Mr. Swinton, to request the Honourable the Court of Directors to forward two pair of boat

engines capable of being applied to vessels adapted to the navigation of rapid rivers. The power stated as requisite for the purpose was two twenty-horse engines for each vessel to be built, and it was at first contemplated that both the steamers should be employed in the Assam Valley.

The Honourable Court, in compliance with the application so made, forwarded the engines now in the Hooghly and Burhampootur, but instead of twenty-horse power engines, they are all of twenty-five, being made by Mr. Maudsley, one of the first machinists of England, who, justly reckoning that the powers of steam in vessels of the description required had been somewhat overrated, thought it better to exceed the indent. Along with the engines, plans were forwarded from England of the vessels to be built for them: and the Burhampootur, both in build and dimensions, corresponds as nearly as can be with these plans.

Upon the arrivals of the engines in 1826, Mr. Seppings, the Company's marine surveyor, observing that the vessels were comparatively small, and incapable of affording the accommodation desired for any number of troops, thinking likewise that by widening the beam and adding to the length, a less draught of water would be secured, proposed to alter the plan to obtain these advantages. He further stated, that to furnish crooked timbers for the sides of the vessels, according to the English plans, would add greatly to the expense. He proposed therefore to make the floor or bottom quite flat, joining the sides on at a right angle, whereby a greater capacity of stowing coal would, he conceived, be obtained with less draught of water. These alterations were recommended to Government by the Marine Board, whereupon Mr. Swinton laid a further note before the Government, pointing out that the deviation from the English plans would require the main shaft of the paddle-wheels to be cut and lengthened; that this was a hazardous operation, and, with the other alterations, might endanger the success of the whole design, if both vessels should prove unserviceable in consequence. He accordingly urged that one at least should be built upon the European plan, which was clearly the safer. On this occasion Mr. Swinton represented that one boat only might suffice for service in the Burhampootur, under the commissioner on the north-eastern frontier, and that the other might be made applicable to general service on the Ganges, or elsewhere, as Government might find occasion to employ it. In order to overcome the difficulty about crooked timber for the sides, a tender was presented by Mr. Swinton from Mr. James Kyd, who offered to build a vessel exactly according to the English plan for 85,000 rupees. Yielding to Mr. Swinton's arguments, Government determined that one of the two vessels should be built on the English plan, though at a somewhat increased charge, and though at first authority was given to increase the beam of the other, that scheme was ultimately relinquished, and the Howra Company tendered to build the other boat for 65,000 rupees, with beam and length according to the English plan, but without crooked timbers, and with a rectangular section across. The Burhampootur is the vessel built by Mr. Kyd, the Hooghly that of the Howra Company, and both are declared to be equally well executed according to the contracts.

When the Burhampootur was finished it was determined to assign her for service in the Assam Valley, and relays of coal having been forwarded, she was to have started about the middle of the past month. The Hooghly was to be retained for general service at the Presidency, where there is employment for a vessel of the kind in conveying troops to the Chin-urah depôt, and in other duties, for which the sea-going steamers are not so well adapted.

The dispatch of the Burhampootur to her destination in Assam has been delayed in consequence of its being the wish of the Governor-general that the question of steam navigation should be first taken up as a general one, and be considered with reference to all the purposes to which vessels propelled by steam may eventually be made applicable in this country, leaving the local appropriation of one of the existing boats to the particular purposes contemplated in Assam to stand over until experiment shall have been made on which to form a determination as to how far it is worth the while of this Government to apply

APPENDIX,
No. 25.
continued

apply steam more extensively in place of the common river craft, now of necessity used. The above Memorandum has been prepared by the Governor-general's direction, in order to bring this question forward.

(Signed) H. T. PRINSEP,
Secretary.

7th Aug. 1828.

(5) Extract Public
Letter
from Bengal,
31st March 1829

(5.)—EXTRACT PUBLIC LETTER from *Bengal*, dated 31st March 1829.

131. We approved the proposition for letting out to hire the Government steamers, as a means of reducing the charge of maintaining them. The Marine Board were accordingly desired to fix a rate for each vessel, including the new steamer Hooghly, and to give public notice that they would be for hire at any time when not actually engaged on the public service; but we cautioned the Board against entering into engagements of a nature to embarrass the Government in case of any sudden call for the services of a steamer.

(6) Extracts
Report
on proposed
establishment of
Steam-tugs
on the Hooghly

(6.)—EXTRACTS REPORT of COMMITTEE appointed by Government for the purpose of discussing in all its bearings the proposed Establishment by Government of a sufficient number of Steam-tugs to insure the more speedy and safe navigation of the River Hooghly.

1. That the introduction of steam-tugs is desirable in the highest degree, and that the adoption of such a measure will afford facilities in the navigation of the river, hitherto but very partially known, your Committee have no hesitation in saying the primary advantages to be derived are self-evident; but there are others of collateral bearing, the limits of which cannot be defined but by mature experience; amongst the former, the most prominent are: 1st. Expedition in the passage up and down the river; 2d. The ability to move up and down at a greater draught of water than at present; 3d. Less risk of grounding, from the ship being under greater command; 4th; A saving in anchors and cables: and the value of each of these advantages to the shipping interests varies according to circumstances; besides which, when the fact has been once established that the risk of this river has actually been reduced, much of the present prejudice existing among ship-owners and underwriters to the river will gradually wear away, and the consequence will be an increase of shipping in the river.

2. Your Committee cannot avoid stating, that the interests of the Honourable Company are likely to be more promoted by the adoption of the proposed tugs than any other party concerned in the shipping of this port, particularly as respects their China ships, and the trade carried on by their regular and extra ships; the two latter descriptions will in future be brought off town and laden, by which measure demurrage, sloop hire, and the heavy losses sustained by disaster and plunder at the lower stations of the river, will be prevented; in fact, so much will be gained by the change of the system, that it will be the interest of Government to bring up their trading ships and take them down by steam free of all charge against their owners.

3. Your Committee conceive it undesirable to attempt, in the first instance, to establish the full number of tugs to conduct the whole navigation of the river; they think it would be far more advisable to try the experiment on a small scale, by which means the advantages and disadvantages of the system would be sufficiently developed to afford much more sure grounds for the foundation of a full and efficient establishment than can possibly be obtained at the present time, and with this view of the case, your Committee beg to observe that Government have the means already at command to commence the dispensation of the many advantages we have pointed out in favour of all parties concerned,

concerned, by equipping the Enterprize, Irrawaddy, and Ganges as steam-tugs, which measure we are assured will equally promote the shipping interests of this port and the best interests of the Honourable Company.

13. Your Committee have great satisfaction in submitting to the notice of his Lordship in Council a very comprehensive Memorandum of the results likely to appear by the adoption of steam-tugs in aid of the navigation of the Hooghly, from the pen of their able and intelligent colleague Mr. James Mackenzie, which document they deem equally conclusive and convincing.

14. Should his Lordship in Council not be disposed to employ the three Government steamers as proposed, your Committee would recommend that immediate steps be taken to establish two tugs of the following burthen and power : one of about 270 or 280 tons burthen, and furnished with two engines of eighty-horse power each, and copper boilers, the other to be from 200 to 250 tons burthen, with two sixty-horse engines : the first to ply below Mud point, and the other all above that place.

(6.)—MEMORANDUM by JAMES MACKENZIE, Esq. relative to the Advantages likely to result from attaching Steam-tug Establishments to the existing Pilot Service, dated 20th December 1827

APPENDIX,
No. 25.
continued
Steam
Communication
with India,
and on the Rivers
of India

(7.) Memorandum
relative
to Steam-tug
Establishments

In 1822-23, 219 private vessels arrived at and 215 departed from Calcutta, none of which experienced any detention on the passage from or to the Sand Heads except what attended the navigation of the river. In some cases the progress of those ships would not have been facilitated by the assistance of steam-tugs, but in most instances a material saving of demurrage would have been effected by such assistance, and the extent of the accidents experienced from the usual navigation of the river would have been materially reduced. It will no doubt be admitted that the use of steam-tugs would reduce the average passage of ships arriving in February, March, April, May, and June : to three days in July : November, December, and January, to four days ; and in August, September, and October, to five days ; also, that the average passage of ships outward bound would be thereby similarly reduced, in November and December, to three days ; in October, January, February, March, and April, to four days ; and in May, June, July, August, and September, to five days ; with reference, therefore, to the actual passages of the above vessels that arrived and departed in 1822-23, between Calcutta and the Sand Heads, the following results of comparison show the demurrage, calculated at eight annas per ton per day, which would have been saved by the assistance of steam-tugs, in all cases of protracted passage :

ON ARRIVAL.		Number of Ships	Ton	Demurrage.			
Ships that would have had their passages shortened by the aid of steam-tugs	Ships of 500 tons and up- wards	36	21,467	57,770	2	11	0
	Ships from 300 to 500 tons	64	23,253	60,454	8	6	3
	Ships under 300 tons ..		10,603	18,404	6	1	11
		155	57,623	1,36,629	2	5	11
Ships that would not have required steam-tugs ..		64	22,944				
TOTAL		219	80,567				

APPENDIX,
No. 25.
continued

(7) Memorandum
by
James Mackenzie,
Esq
relative
to Steam-tug
Establishments

ON DEPARTURE.		Number of Ships.	Tons.	Demurrage			
Ships that would have had their passages shortened by the aid of steam-tugs	Ships of 500 tons and up- wards	45	26,628	1,12,106	4	3	4 0
	Ships from 300 to 500 tons	94	37,459	1,07,626	2	13	11 0
	Ships under 300 tons	71	14,323	35,646	8	2	7 9
		213	78,405	2,55,078	8	3	4 1
Ships that would not have required steam-tugs ..		2	718				
TOTAL		215	79,103				

But in the same year there were* twenty-nine ships besides that experienced extra detention on the inward or outward passage, and five more ships that were so detained on both passages, so that, allowing the demurrage attending the extra detention to be balanced by the extra expenses attending its causes severally, and considering the demurrage for the whole detention would have been saved by the tugs, the above calculation, adding those forty four ships, will stand thus :

ARRIVALS		Number of Ships.	Tons	Demurrage.			
Ships of 500 tons and upwards	Ships of 500 tons and upwards	62	37,717	1,40,343	0	3	11 0
	Ships from 300 to 500 tons	75	29,773	85,508	8	2	13 3
	Ships under 300 tons	56	11,223	20,164	8	1	13 0
Ships that would have had their passages shortened by the aid of steam-tugs		193	78,613	2,46,016	0	3	2 0
Ships that would not have required the steam-tugs		70	25,752				
TOTAL		263	1,04,365				

DEPARTURES		Number of Ships.	Tons	Demurrage.			
Ships of 500 tons and upwards	Ships of 500 tons and upwards	72	42,015	2,54,487	6	0	10 0
	Ships from 300 to 500 tons	109	43,579	1,52,691	3	8	0 0
	Ships under 300 tons	75	14,543	35,976	8	2	7 6
Ships obtaining benefit from steam-tug assistance ..		254	1,00,137	4,43,154	8	4	6 9
Ships that would not have required the tugs ..		2	718				
TOTAL		256	1,00,855				

Aggregate

Aggregate Number of Ships arriving and departing, with their Tonnage and Demurrage :

	Number of Ships.	Tonnage.	Demurrage.
Arrivals	263	1,04,365	2,46,016 0
Departures	256	1,00,855	4,43,154 8
	519	2,05,220	6,89,170 8

Giving an average Demurrage per Ton on arrival or departure .. Rs 3 5 8

In the same year also of the Honourable Company's ships, the cargoes of which were comprehended in the Government accounts of the year, there were thirteen arrivals and the same number of departures; and supposing that steam-tugs would have brought them up to Calcutta at once and taken them down loaded, or made an approach to such an object, according to the expectations expressed in the Board's letter, with a saving in demurrage equal to the average above stated for ships exceeding 500 tons, the calculation on this account would stand thus :

HONOURABLE COMPANY'S SHIPS

	Number of Ships.	Tonnage	Demurrage per ton	Entire Demurrage
Arrivals	13	14,451	3 11 6	53,739 10 6
Departures	13	14,502	6 0 10	87,767 5 0
	26	28,953	4 14 2	1,41,506 15 6

The estimate of demurrage, therefore, that might have been saved in the above year by the employment of steam-tugs, in all cases of arrivals and departures of trading ships, is as follows :

ARRIVALS AND DEPARTURES.	Number of Ships.	Tonnage	Demurrage.
Honourable Company's trade	26	28,953	1,41,506 15 6
Private trade	519	2,05,220	6,89,170 8 0
	545	2,34,173	8,30,677 7 6

APPENDIX,
No. 25.
continued

() Memorandum
by
James Mackenzie,
Esq.
relative
to Steam-tug
Establishments

There were besides, in the same year, the arrival and departure of other Government vessels, as the *Ernaad*, &c. which would have been equally benefited by the assistance of tugs, but are not included in the above.

The data for the above estimate has been drawn from the account of the Master-Attendant's office; but to estimate the value of the property affected in the calculation, I have taken from the Government records the account of imports and exports for the same year, distinguishing the Company's from the private trade, as follows:

		Honourable Company's Trade, Number of Ships	Tonnage.	Valuation	Valuation of Cargo per Ton
Imports	.. .. .	13	14,451	13,68,381	94 69
Exports	.. .. .	14	14,493	1,81,12 755	1,212 12
			29,394	1,94,81,136	662 75

Private Trade, deducting the Tonnage and Cargoes of Dhomes:

		Private Trade, Number of Ships	Tonnage.	Valuation.	Valuation of Cargo per Ton
Imports	.. .. .	271	1,08,687	4,24,88,031	390 92
Exports	.. .. .	278	1,08,881	4,85,00,327	445 44
			2,17,568	9,09,88,358	

Honourable Company's imports and exports	...	Sa. Rs. 1,94,81,136
Private imports and exports	... ..	9,09,88,358

Estimating the value of the Honourable Company's ships at 200 rupees per ton, and considering the private ships as insured at the same rate, then

Honourable Company's ships, arrivals	Tons 14,451
— departures	... 14,493
	<u>29,394 ÷ 2 = 14,679 a' 200 = 29,39,400</u>
And private ships arrived	... 1,08,687
— departed	... 1,08,881
	<u>2,17,568 ÷ 2 = 1,08,784 a' 200 = 2,17,56,800</u>

Amount value of ships and cargoes	Sa. Rs. 13,51,65,694
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In

In 1822-23 there were three vessels lost going out, *viz.* the Liverpool, Oracabissa, and Helen, and it may be presumed that had steam-tugs been then in full employment, no such catastrophe would have occurred, as they would have been either at sea when the gale came on, or the steamer in charge of each could have taken her to a more sheltered situation on its approach.

According to the preceding estimate of value, this loss will stand thus :

	Tons		Rs.
Liverpool	527	Total Tonnage {	at 200 rupees per ton for the hulls 1,95,000
Oracabissa	280		
Helen	168		
	975		at 14,544 rs. per ton for the cargoes 4,31,301
			6,29,301

making with the above estimated demurrage a sum of sicca rupees 14,59,981. 7. 6. loss from demurrage and shipwreck in the river during 1822-23, or more than one per cent. on the entire value of the ships and cargoes, both Company's and private.

The use of the steam-tugs would be also attended with a material saving in anchors and cables, as few of these in comparison to what are at present lost would remain subject to the liability of loss, when a constant choice of anchoring ground existed. I should consider this saving to be perhaps under-rated when estimated at one anchor and cable, value 1,600 rupees, for every four ships; or 1,600 rupees on every eight of the arrivals and departures (545), equal to 200 rupees for each arrival and departure, *viz.* sicca rupees 1,00,000. In 1823 when my attention was first directed to the subject, I estimated the amount of loss under this head at a considerably higher rate, from the knowledge of very extensive losses of this description that had taken place; but the increasing use of chain cables must have tended to diminish such loss, although it has increased losses of another kind, from the additional damage thereby occasioned to the hulls of vessels obliged to anchor in unfavourable situations.

Another head of expense would be greatly reduced by the use of steam-tugs, *viz.* the charges incurred in consequence of vessels grounding on the passage up or down, for docking, unloading, and reloading, damage sustained by the cargoes, demurrage, &c. This I should conceive to be under-rated at another lac of rupees; and I am of opinion that the charges resulting from the loss of anchors and cables and from grounding, beyond what the use of steam-tugs might have been unable to prevent, must have been sufficient in 1822-23 to increase the above estimate of demurrage and actual loss from shipwreck to sicca rupees 18,00,000.

I apprehend also that the risk attending the conveyance of cargo to and from ships at the lower stations in the river is considerable at certain seasons, and that the damage and loss resulting therefrom, the weather and the misconduct of boats' crews both considered, might be deserving of separate estimate; but connecting these with the demurrage above stated, and viewing the whole amount with reference to the combined interests of owners and shippers, I should not consider it as over the mark for general calculation, although in individual cases many might estimate their demurrage at less, and some few, from particular circumstances, might reckon their own at a greater rate; it may be sufficient however to show, when the risks of entire loss, of loss from grounding, of losing anchors and cables, &c. with which the underwriters are immediately concerned, are added to the account, that there is sufficient reason for all persons interested to desire the establishment of steam-tugs in direct aid of the pilot service.

As the expense of providing and employing steam-tugs would be necessarily great, the requisite charge for their assistance would be in proportion compared with the existing pilotage charges; but as it would be clearly for the interests of owners, shippers, and underwriters that the intended assistance should be obtained in perhaps a majority of cases, I have no doubt that the wishes of Government with regard to diminishing

APPENDIX,
No. 25.
continued

(7) Memorandum
by
James Mackenzie,
Esq.
relative
to Steam-tug
Establishments

the expenses of the pilot establishment, and at the same time improving the navigation of the river, would be fully answered by creating the proposed establishment of steam-tugs, and leaving their employment entirely optional on the part of owners and commanders of ships.

Supposing that, with regard to arrivals, a number of ships equal to those on which demurrage has been above calculated for the six months of 1822-23, from July to December both inclusive, were to use the steam-tugs when inward bound, the charge being for ships above 750 tons three rupees per ton, and for those from 500 to 750 tons two rupees twelve annas, or at an average of two rupees fourteen annas for those above 500 tons, for ships from 300 to 500 tons at an average of two rupees eight annas, and for those under 300 tons two rupees, the results of actual payment compared with demurrage would be as follows:

	No.	Tonnage	Demurrage		Steam-tug Charge per Ton		Entire Steam-tug Charge	
			Rs.	As.	Rs.	As.	Rs.	As.
Ships of 500 tons and upwards ..	42	25,446	1,08,637	0	2	14	73,157	4
— from 300 to 500 ..	51	20,393	58,876	8	2	8	50,982	8
— under 300 tons ..	29	5,769	12,646	0	2	0	11,534	0
	122	51,608	1,80,159	8	—	—	1,35,673	12

And the results of actual payment compared with demurrage for the similar departures in the other six months of the same year, would be

	No.	Tonnage	Demurrage		Steam-tug Charge per Ton.		Entire Steam-tug Charge	
			Rs.	As.	Rs.	As.	Rs.	As.
Ships of 500 tons and upwards ..	37	22,537	1,63,706	0	2	14	64,793	14
— from 300 to 500 tons. .	59	22,055	90,678	8	2	4	55,137	8
— under 300 tons ..	43	8,605	22,806	8	2	0	17,210	0
	136	53,197	2,77,191	0	—	—	1,37,141	6

Thus two hundred and fifty-eight arrivals and departures (less than one-half of the whole) liable to an aggregate expense of demurrage of sicca rupees 4,57,350. 8. would pay for the aid of steam-tugs Sa. Rs. 2,72,815 2 0

Add to this a charge on Honourable Company's ships at

1. 14. 2. per ton for steam-tug assistance, as above

stated on 28,953 tons and twenty-six ships 1,41,506 15 6

Estimated steam-tug charge on two hundred and four

arrivals and departures within the year Sa. Rs. 4,14,322 1 6

I am of opinion that three steam-tugs, two of 160-horse power each, and one of 120-horse power, would be found sufficient to answer the wants of the port, considering their employment to be optional with the public: that they could be prepared complete for service at an entire cost of sicca rupees 7,00,000; that they would render three pilot vessels unnecessary, and that the officers and crews of these pilot vessels would be sufficient for the navigation of the tugs. In this view the ordinary sailing expenses of the tugs would remain comprehended within the existing charges of the pilot establishment, and the expenses might be estimated as follows:

	FOR ONE VESSEL		FOR THREE VESSELS	
	Per Month	Per Annum	Per Month	Per Annum
Engineer department	600	7,200	1,800	21,600
Coals for 25 days at 12 maunds per hour, and 10 hours each day .. }	1,500	18,000	4,500	54,000
Interest on cost of the vessels, } 7,00,000, at 12 per cent. . . }	—	—	7,000	84,000
Wear and tear, say 12 per cent ..	—	—	7,000	84,000
Superintending Engineer at 800 } rupees per month .. }	—	—	—	9,600

Excess of Annual Charge to the Pilot Establishment for three tugs .. : 2,13,200

This hasty estimate may be found defective, but should it come near the truth, as the amount of estimated additional charge to the pilot service is less than two-thirds of the above estimated steam-tug charge in 284 arrivals and departures, it might be found that two rupees per ton on every inward or outward passage of ships above 500 tons, 1 8 on those from 300 to 500, and one on those under 300, with three on the Honourable Company's ships, would more than cover the additional charge, as the steam tug receipts on the above 284 arrivals and departures would at these rates amount to sicca rupees 2,60,869, and the comparative lightness of the rates would be attended with an increased employment of the vessels.

Many ships would under such circumstances use the steam-tugs at all seasons, whether inward or outward bound, and if the steamers, which would be capable of bringing up or taking down ships of 1,200 tons, were found equally capable of bringing up or taking down at once two vessels (each) from 350 tons downwards, the charge to small vessels might be thereby lessened further, with an increased certainty in regard to the sufficiency of the receipts.

The above charges are considered as distinct from and beyond the usual pilotage charges, and not applicable to vessels declining the assistance of the steam-tug establishment; but should they after so declining require subsequently partial assistance, they ought to pay the whole inward or outward charge, as the employment of the tugs sent purposely to their aid would, unless in some casual cases, occupy nearly the same time.

As the expense of the tugs would eventually be shared by owners, shippers, and underwriters, indirectly if not directly, they ought to be left to settle it among themselves according to their estimate or experience of risk and demurrage.

The

Commercial

APPENDIX,
No. 25.

continued

(c) Memorandum
by
James Mackenzie,
Esq.
relative
to Steam-tug
Establishment.

The tug should be adapted as much as possible for the exclusive purpose of towing with the best effect, having only the means of accommodating such pilots as might require to proceed to or from the pilot station beyond their own officers.

I consider (as above alluded to) that the proper parties to superintend and conduct the navigation of steam-tugs would be (eventually, if not from the commencement) one active branch or master-pilot for each, and some junior officers of the pilot establishment, changed occasionally in individual cases, to give all the service the opportunity of becoming acquainted with its general details. It would, in my opinion, be indispensable to have an able, active, and responsible individual, thoroughly acquainted with the nature and management of steam machinery, to inspect the vessels daily when at Calcutta, and to keep a vigilant eye over the conduct of the working engineers.

By making steam-tugs an integral branch of the pilot establishment, the Government would be eventually enabled to make very considerable retrenchments in the existing scale of their marine expenditure: for if any row-boats would be required, six pilot vessels or fewer might be found sufficient for the duty of the cruising station, allowing one to be always at or on the passage to or from Calcutta. A less establishment of pilots would be ultimately found as efficient as the present. It might be however injudicious to proceed to retrenchment until the steam-tugs had come into complete operation, and had shown by experience the expediency of dropping whatever should be found superfluous. In lessening the number of pilots, the interests of the parties could be sufficiently provided for by Government in many ways, so that no individual injury might be sustained, that the service remain the same as to allowances and prospects, on a reduced scale only as to numbers.

The abolition of any existing port charges, or the reduction of the steam-tug charge eventually to a *minimum* rate, would of course merit and obtain the consideration of Government, after the new establishment had come into complete operation, and had shown how far an increase of aggregate receipts could warrant reduction in a description of charges which must under any circumstances press heavily on the commerce of the port.

(Signed) JAMES MACKENZIE

Howrath, 20th December 1827.

(S) Letter from
Bengal
Government
18th May 1830

(8).--EXTRACT LETTER (Public Department) from the *Bengal Government* to the Comt of Directors, dated May 18th 1830.

2. We propose in this communication to state what has been done and what is proposed to be done in respect to the introduction of steam navigation into the rivers of this country

The two steamers, Hooghly and Burhampootur, were launched in the beginning of the year 1828, and on our proceedings, noted below,* will be found some correspondence respecting the naming and appointing establishments and commanders for both vessels; also touching their draught, consumption of fuel, capabilities, and eventual employment.

4. It was at first proposed that the Burhampootur should proceed to the river Burhampootur, to be at the disposal of Mr. D. Scott, the political agent in the eastern frontier, so as to afford him the means of prompt communication with the posts of Upper Assam, which are

* Cons. 3d Jan 1828, No. 58 to 60; Cons. 27th March No. 11 and 12; Cons. 10th April, No. 12 and 13; Cons. 17th April, No. 31 to 35; Cons. 21st Apr., No. 7; Cons. 1st May No. 29 to 31; Cons. 5th June, No. 19 to 21; Cons. 26th June No. 14 to 16; Cons. 7th Aug. No. 33 to 35; Cons. 24th April, 1828, No. 7; Cons. 12th June 1828, No. 28 to 30; Cons. 1st Aug 1828 No. 7 to 10; Cons. 23d Oct No. 17 and 48; Cons. 10th Dec. 1828, No. 68 and 69; Cons. 10th Dec. 1828 No. 50; Cons. 23d Jan 1829, No. 50 and 51; Cons. 14th July 1829, No. 41 to 43; Cons. 22d Sept 1829, No. 51 to 54; Cons. 7th Nov 1828, No. 77 (A)

are accessible only by water, and for a great part of the year with extreme difficulty, owing to the strength of the current and the prevalence of easterly winds blowing the same way with the stream. The Hooghly was to have remained at the disposal of Government at the Presidency, and to be there made applicable to any service that might arise.

5. Very soon after the arrival of the present Governor-general, his particular attention was given to the subject of river steam navigation, and the prosecution of the Burham-pootur's voyage to Assam was for the time suspended, it being his Lordship's desire that before either of the vessels should be appropriated to any particular service, the question of steam navigation upon the rivers of India should be considered as a general one, with reference to all the purposes to which vessels propelled by steam might eventually be made applicable in this country.

6. By his Lordship's desire our secretary prepared and laid before us a Note describing the manner in which the navigation of the rivers was at present conducted, and the dangers, delays, and accidents to which it was liable, and pointing out the objects to which, in his opinion, the propelling power of steam could be applied with advantage.

7. This paper, with other memorandums bearing on the question, was forwarded to the secretary at the India House in a letter dated 10th August 1828, and will doubtless have been laid before your Honourable Court. It was resolved to order an experimental voyage to Allahabad with one of the new river steamers as a preliminary measure to any further consideration of the subject. We selected two intelligent officers, Captain Johnston, of the Enterprize, and Captain Prinsep, of the Bengal Engineers, to superintend the experiment, and report upon the results. Copies of the instructions issued to them and to the Marine Board upon the occasion, were forwarded to England in the packet addressed to the secretary at the India House, above referred to.

8. The voyage to Allahabad was accomplished, including stoppages, in twenty-four days, and fourteen days were occupied in the return, including two days' delay at Benares to repair and refit. From Captain Johnston and Captain Prinsep we received full reports upon the state of the river and incidents of the voyage, and from the latter officer we further received a corrected survey of the Ganges and Hooghly rivers, as traversed by the steamer; we obtained also a particular report from Captain Smith, the engineer officer at Allahabad, upon the state of the Ganges at that place. This had been called for in consequence of its being represented to us that the navigation was more difficult and dangerous at that point than at any other in the whole course of the river. We beg to solicit the attention of your Honourable Court to these reports, which are replete with important and valuable information on the subjects discussed in them. We ordered Captain Prinsep's map of the rivers to be lithographed for the use of the department, which having been done under Captain Prinsep's superintendence, twenty copies have been already forwarded to your Honourable Court.

9. We further call upon the Board to report upon the expense and the practicability of making the alterations suggested by Captain Johnston in the rudder and other parts of the Hooghly steamer, so as to fit her for a second experimental voyage, which we desired to be made when the river should be at its lowest.

10. Our final resolution upon the subject of this first voyage, and the results it had elicited, including the Board's reply to the reference above cited, is recorded as per margin.* It was to the following effect:

11. It seemed that the Hoogly steamer, labouring under the disadvantage of a defect either of construction or in her rudder which made her very difficult to steer, had nevertheless performed the voyage to Allahabad, in the most unfavourable season, in twenty days of twelve hours steaming, without hazard or injury, and without meeting any obstacle not easily surmounted. It was the opinion of the officers employed that, with better arrangements to obtain pilots, or with what must of course be the necessary consequence of

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of prosecuting these experiments, more knowledge of the channels of the river in those conducting the enterprise, the time of the upward voyage might have been very considerably abridged, we were indeed led to hope that with these advantages, it might in the rainy season be accomplished in fifteen days by the route followed on this occasion; the voyage down occupied ten days, which was evidently much more than would have been necessary if the channels had been well known so as to have admitted of the power of the steam being freely used. The caution most properly employed by Captain Johnston on this first occasion will be superfluous hereafter, and a gain of at least two days will then probably be made in the return voyage. Thus it appeared that, including stoppages for coal or from accident, the Government could reckon upon being able to make the voyage up and down in the rainy season, between Calcutta and Allahabad, in one month, with either of the present river steamers: so far, therefore, the important question as to the possibility of applying such vessels on the Ganges for purposes of internal navigation had been set at rest, and the probable gain of time over the craft of the country with vessels of their dimensions and power of engine had also been ascertained.

12. The officers employed on the expedition had rightly given their attention to the accumulation of information respecting the state of the river, and their reports did them great credit. The facts collected by them in regard to its rise and the rapidity of the current at different seasons and at different places were curious and interesting: the observations forwarded by Captain Smith from Allahabad, as to the state of the channels above the junction of the Ganges with the Jumna, afforded results novel and unexpected. The map that had been prepared by Captain Prinsep of the present course and channels of the Ganges, as found during the voyage in the months of September and October, being on a scale to show the principal sand-banks, was calculated to be extremely useful in subsequent voyage of the same kind, and was, as above stated, ordered to be lithographed in order to be put into the hands of those employed on them. The expense of this, with any other incidental charges incurred during the voyage, we directed to be submitted in a contingent bill, and passed in the usual form. It remained for us to determine in what manner to follow up the experiment that had been made, and how best to direct its results to ends of practical benefit to the country or to Government.

First. With respect to the construction of ever steamers adapted to the navigation of shoal-water channels, there seemed reason to apprehend from the reports both of Captain Prinsep and Captain Johnston, and especially from the concluding observations in the report of the former officer, that a less draught of water than four feet could scarcely be hoped for with vessels of manageable dimension, using low pressure engines, and carrying their own coal. It seemed probable that even with this draught of water a vessel of a lighter description and of a different construction might be made to possess greater capacity for stowage and accommodation than the present steamers: but all the objects we had in view seemed hardly attainable, except by the use of high-pressure engines. Under the impression that in the progress of modern discovery in Europe means might perhaps have been devised of preventing the danger hitherto attaching to the use of this description of engines, we determined to solicit information upon this important point from your Honourable Court. There seemed to us to be no objection whatever on this score to the employment of a high-pressure engine in a separate vessel to be used as a tug, by which plan, while all apprehension for the safety of the crew and cargo of the principal accommodation vessel would be averted, the division of the burden would remove the obstacles to complete success presented by the deficiency of room for both fuel and for passengers in the same boat. In the second experimental voyage we proposed to ascertain the practicability of tugging, and if established, it was resolved that no time should be lost in begging your Honourable Court to send out the necessary high-pressure engines.

Secondly. With respect to the accommodation of the Hooghly steamer for passengers, and the means of improving that afforded by her original construction, Captain Johnston had offered several valuable suggestions on this point, and the Marine Board, and those consulted by them on the subject had also submitted propositions which were fully considered

sidered by us with reference on one hand to the objects in view, and on the other to the expense of carrying each into execution. It seemed to us that the vessel, laid out as she then was, could not be applied to convey either troops or passengers; for the former she was much too confined in her accommodation, besides wanting the tonnage for the requisite stores and provisions, independently of that required for the coal; for the latter, her cabins, besides being heated by the proximity of the boiler and chimney, so as to be scarcely bearable in the hot months, were ill adapted, from the manner in which they were laid out, as well as from insufficiency of space. It appeared indispensable, therefore, if it were desired to apply the Hooghly to such purposes in future voyages, and we were then of opinion she might very advantageously be used for the conveyance of cadets and junior officers to their stations, that a light poop should be added so as to afford a double tier of accommodation, and we preferred that this should be constructed of timber rather than to adopt the Board's recommendation, and provide the desired accommodation above by means of canvas enclosures, conceiving that, besides being liable to injury from weather, such an awning would be more in the way than a poop capable of bearing the weight of passengers, and of the crew to work the vessel. The poop was ordered to be built in the cheapest possible form, and we thought the expense of cutting down the present deck, and adding sponsons, as proposed by Captain Johnston, might well be saved. With the addition thus determined upon, accommodation might be afforded for six or eight officers of the junior ranks, and any future voyage made would combine the advantage of providing them a passage at a saving to Government of the boat allowance to each, with any other objects, experimental or real, that might be proposed to be attained. We directed that no time should be lost in putting in hand this addition, and that the poop should be similar to that built on other steamers of the river, care being taken to extend the accommodation as much as could be done with due attention to the strength of the beams, and to the necessity of keeping the upper works light.

Thirdly. With respect to the next point, *viz.*, the best means of remedying the serious inconvenience and the delays experienced from the bad steering of the vessel, we had made inquiry to ascertain to what this defect could be ascribed, and to what circumstances the Burhampootur, which was of nearly similar shape, was indebted for her superiority in this respect. It appeared that while plying on the river, before proceeding on the voyage, the rudder of the Hooghly was of a form reaching several inches below the level of the vessel's bottom, consequently, although this was flat, and wholly without keel, still that part of the rudder which protruded below had considerable hold on the water. The rudder of the Burhampootur was of this construction, and to this principally was owing the superiority of that vessel in the command over it possessed by the helm. Captain Johnston, before proceeding on his experimental voyage, judging very rightly that in unknown channels, with continual danger of grounding, it was of the first importance that the rudder should be kept clear, caused the projecting part to be cut off and added to the width, in order to make up thereby for the loss of power in depth. To this mainly was the extreme unmanageability of the vessel during the voyage to be ascribed, and it occurred to us that the most natural remedy would be to provide a rudder capable of being raised clear of the bottom in shoal water, but with the power of being let down like a sliding keel, to exert greater power over the vessel when making way amongst the rapids and whirlpools of the main current. We had been given to understand that a rudder upon this construction could be made and fitted at comparatively small expense, and we were accordingly disposed to prefer that this plan should first be tried before any of the other methods, such as the alteration of the sternpost, the adaptation of a rudder to the bows, or the scheme for using a double rudder affixed to each quarter, was attempted. Any of these might hereafter be resorted to in case the more simple alteration above explained should be found to fail.

13 Having thus decided as to the improvements to be made in the Hooghly, in order to remedy the defects pointed out, and fit her for further voyages with greater advantages than those under which the last had been performed, we proceeded to explain the manner in which we thought it would be expedient to pursue the measures commenced

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for ascertaining how far steam navigation could successfully be applied to the purposes of Government or of the public at this presidency.

14. Of the objects in the view of Government, as capable of being promoted by steam navigation, the conveyance of public and private treasure, and of valuable, not bulky articles on freight, together with the providing accommodation, according as the poop might be fitted up, to six or eight junior officers, were the only ones to which the Hooghly and Burhampootur could then, we thought, be adapted; unless indeed, and the matter seemed to deserve experiment, the power of their engines compared with the diminished rapidity of the stream in the dry season should enable these vessels to take a second vessel in tow.

15. It was our opinion that a second experimental voyage should be made for the purpose of more fully ascertaining the capabilities of the vessels in these respects, after the alterations above determined upon had been made in the Hooghly's rudder and accommodation. An experiment might be tried with the Burhampootur in the interval of the preparation of the Hooghly, to ascertain the difference of speed consequent upon taking a large budgerow, or other accommodation vessel, in tow; and if this was found not to retard the vessel more than two miles an hour, which was the assumed difference of velocity in the stream of the Ganges in the rains compared with the dry season, the Hooghly might proceed on her second voyage with a vessel of the kind in tow, so as to afford accommodation and the means of rapid conveyance to twice the number of officers above contemplated as capable of being furnished with a passage.

16. The Marine Board were ordered to make the requisite arrangements for the transmission of coal to the places where the same might be required, and it occurred to us that, with judicious management in the time of dispatching each boat, the coal might be so forwarded as to be found at the required distances in separate boats, which would be more convenient than by lodging it in larger depôts. In like manner, when the day might be fixed for the departure of the Hooghly, we ordered notice to be issued by advertisement, inviting tenders for freight of treasure or of other valuable articles of small bulk, on such reasonable terms as the Board might deem likely to induce native and other merchants to offer articles for conveyance to the different stations that would be passed in the voyage.

17. It seemed to us that, in consequence of the lateness of the season, it would be necessary on this occasion to dispatch the Hooghly, when ready for the voyage, by the way of the Sunderbuns. The Marine Board were desired to ascertain from Mr. May, superintendent, the quantity of water in the channels of the Nudda rivers, and to regulate their proceedings accordingly. Should the Hooghly be compelled to take the line of the Sunderbuns, the Board were referred for information as to the best route to Captain Prinsep.

18. We here notice incidentally some correspondence we had with the Marine Board as to the method of docking and examining the bottoms of vessels of this description; also the reports on two trials of speed between the Hooghly and Burhampootur.*

19. After some delay in building the poop, and making the other alterations ordered by us, the Hooghly was at length reported to be nearly ready for her second voyage, and we ordered advertisements to be issued for the conveyance of private treasure to places on the route, preparatory to the voyage being made in the course of the month of March.

20. We gave the command on this occasion to Mr. Warden of the pilot service, late commander of the *Neraya yacht*, who had conducted the *Soonamookie* to Anoopshuhur on the

* Cons. 28 Aug. 1828, Nos. 63 and 64, Cons. 18 Sept. 1828, Nos. 13 to 18, Cons. 21 Nov. 1828, 31 (A) to 31 (C), Cons. 6 Jan. 1829, Nos. 4 and 5, Cons. 29 May 1829, Nos. 22 and 23, Cons. 6 Feb. No. 15, Cons. 17 Feb. Nos. 10 to 13, Cons. 20 Feb. Nos. 16 and 17, Cons. 14 Apr. 1829, Nos. 20 and 22, Cons. 23 June, 1829, No. 9

the occasion of Lord Amherst's tour to the Western Provinces, and who, on the previous voyage of the Hooghly steamer, acted under Captain Johnston. The voyage was made through the Sunderbuns by the Doogra Passage in Channel Creek, the rivers communicating between the Hooghly and the Ganges being too shallow at the period of the year to afford passage for a vessel of the draught of the Hooghly. Having reached Benares in twenty-one days, not without considerable difficulty, Mr. Warden carried the Hooghly thirty-seven miles further, but was finally stopped at Betoulee on the Kuchliwa Ghat, where, from the shallowness of the water, it was found utterly impossible to pass in any part of the stream. Mr. Warden's return from Benares, after a delay of seventeen days there to refit, was effected in fourteen days by the same passage through the Sunderbuns. The Hooghly reached Calcutta on the 12th May.

21. This result in the months of April and May, when the water of the Ganges is of course at the very lowest, was not unfavourable. We beg to refer your Honourable Court to Mr. Warden's report of the voyage, recorded as per margin,* and which is an interesting document.

22. Our orders on the result of the second experiment so made,† expressed some disappointment at finding the depth of water in the Ganges reduced, in the months of April and May, so much as to preclude the hope of carrying steam navigation, with the vessels at the command of the Government, beyond Benares and Chunar, in those months; still it was satisfactory to have ascertained the real state of things at the most unfavourable period of the year, and we thought the manner in which this had been done by Mr. Warden left nothing to be desired, and was highly creditable to his skill and intelligence.

23. We were determined to prosecute further experiments of the same description, and ordered depôts of coals to be formed at Patolee, Burumpore, Rajmuhul, Mongeer, Danapoor, Ghazeepeer, Benares, Mirzapoor, and Allahabad ‡

24. The reports on some experiments made under our orders for ascertaining the power of the river steamers as tugs with other vessels in tow, will be found recorded in the margin,§ and we beg to draw your Honourable Court's particular attention to a voyage made by Captain Johnston under our orders to Burhampoor with the two steamers, one taking the other in tow, and the engines of the tugged vessel being unused.

25. The result of these experiments encouraged us to believe, that, with low-pressure engines of the description of those now belonging to Government, it might prove advantageous to employ the steam power by fixing these engines in separate vessels as tugs rather than as now in the vessels of accommodation themselves, where they occupied much space, increased the draught extremely, and produced a degree of heat nearly insupportable at the season when the state of the rivers affords most opening for their employment.

26. Entertaining this impression, we instructed the Marine Board to give their particular attention to the determination of the best form and construction for a river-tug capable of taking in tow large accommodation vessels, and drawing of course the smallest possible quantity of water.

27. It was our wish that the question should, in the first instance, be considered with reference to the steam-engines then available to Government, viz., those of the classes employed in the Ganges and Irrawaddy, and in the Hooghly and Burhampoor.

28. If it should be established that either of these descriptions of steam-engines could be employed advantageously in a vessel of any description with sufficiently small draught and with power adequate to tow an accommodation vessel of the kind and dimensions proposed

* Cons. 23 June 1829, No. 10.

† Cons. 23 June, No. 11.

‡ Cons. 9 June, No. 10

§ Cons. 5 May 1829, Nos. 28 to 33, Cons. 12 May, Nos. 26 and 27, Cons. 16 June, No. 14.

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proposed, we then desired the Board further to take into consideration whether there was any useful purpose to which the one of the present vessels which might be stripped of its engines could be devoted. If, for instance, the engines of the *Ganges* were thought fit to be used in a river-tug, whether that vessel, deprived of its engines, could be employed as a pilot vessel in lieu of any one of the present establishment that might be condemned. So if the engines of the *Hooghly* were transferred to a tug, whether the hull of that vessel could conveniently be converted into an accommodation boat to be taken in tow by the tug.

29. We directed the Board to consult the best informed officers of the Marine department on these subjects, particularly Commodore Hayes, Captain Ross, and Captain Johnston, with Captain Forbes and Messrs. Seppings and Kyd. We also desired that the Board would endeavour to obtain any information procurable at this Presidency regarding the power and properties of high-pressure engines, and to avail themselves of the assistance of the above-named or any other individuals whom the Board might think fit to consult, in order to ascertain what kind of engines of this class were best adapted for the purpose of being employed either in tugs or in the body of accommodation boats, as we understood to be done with so much success in America; we in short directed that the Board would submit this branch of the subject to full investigation, with a view to a special indent being forwarded to England for high-pressure engines of the most approved kind, for the purposes above explained.

30. We followed up these orders by shortly after inviting, by public advertisement, the transmission of plans to the Marine Board, with the offer of a reward of 1,000 rupees for that which should be most approved.* The plans were to be of two descriptions: first, of vessels capable of being used as tugs, with engines on the low-pressure principle, of the power, weight, and description of those in the *Hooghly* and *Burhampootur*; and, secondly, of similar towing vessels with engines on the high-pressure principle. We offered rewards for the best of both descriptions, fixing as the test of excellence, adaptation for speed, manageability, and a small draught of water; the plans were to be given in by the 1st of August 1829.

31. Under the notice issued conformably to these orders, several plans were sent in to the Marine Board, and forwarded to us on the day prescribed.† We thereupon appointed a committee, consisting of the gentlemen named below,‡ to report upon the plans in question.

32. The report of these officers is recorded as per margin,§ and is deserving of your Honourable Court's particular notice. Upon receipt of it we again took up the subject with reference to all that had passed, connected with the object of applying the power of steam to the river navigation of this country. Our resolution was to the following effect:—

First, With respect to the plans and specifications given in under the notice published by the Marine Board in conformity to the orders of this department dated the 3d July last, the Committee appointed to report thereon having declared their opinion that the plan sent in by Captain Cowles was the best of those presented as designs for a tug adapted to the engines of the *Hooghly* and *Burhampootur*, and that, with reference to the conditions of the notice, Captain Cowles was therefore entitled to the sum of 1,000 rupees for the same, we ordered payment of the amount to be made to Captain Cowles through the Marine Board.

33. None of the plans submitted conformed exactly with the conditions under which
a similar

* Cons. 7 July 1829, Nos. 14 and 15

† Cons. 25 June 1829, Nos. 45 to 47; Cons. 4 Aug. 1829, Nos. 26 and 27.

‡ Captain Ross Bell, Captain Hutchinson, Engineer, Captain T. Prinsep, Engineer.

§ Cons. 1 Sept. 1829, Nos. 39 to 47.

a similar sum had been offered for the best plan of a tug with steam-engines on the high-pressure principle, including a description of the engines. This reward, therefore, had not been earned by any of the gentlemen whose ingenuity was exerted in preparing the plans before Government. Nevertheless, the design of Mr. M'Naught was favourably reported upon by the committee, and though not exactly answering the terms of the advertisement, we resolved, in order to testify our approbation thereof, that the sum of 500 rupees also shall be paid to Mr. M'Naught through the Marine Board.

34. We had not received from the Marine Board the information which, by the instructions of this department dated the 16th June last, the Board were desired to collect from professional persons and others acquainted with the subject of steam river navigation. But our attention had been uniformly directed to the matter, and our means of arriving at correct results had been improved by inquiries made in various quarters, as well as by an attentive perusal of the papers and plans above referred to, and in particular of the report upon the experimental voyage made by the two steamers to Burhampore, one steaming with the other in tow; and on the whole we saw reason to be confirmed in the opinion before stated, *viz.*, that in order successfully to introduce the power of steam into the river navigation of this country for the purposes of Government, vessels must be provided of very small draught capable of being used as tugs with considerable power. The Hooghly and Burhampootur, though well constructed vessels, and capable of being employed, to a certain extent, both for accommodation and as tugs, were nevertheless defective, as well from their draught exceeding three feet, whereas more than two is undesirable, as from the confined accommodation they afforded.

35. Vessels with the same or with superior power of engines, but of greater length and beam, appeared indispensable for the purposes contemplated, and we accordingly resolved to put one immediately in hand, to be constructed on the principle which had been approved in the design of Captain Cowles; that is, with the engine resting on beams so trussed and put together as to combine the advantage of distributing the weight and action of the engines over the whole length of the vessel, with the important consideration of preserving by the same means its shape under the liability to hog or to sink in the centre, to which vessels of this construction must, without such preventives, always be liable.

36. The Marine Board were accordingly instructed to procure estimates and put immediately in hand the construction of a vessel of the description alluded to, but we did not wish that the plan of Captain Cowles should be implicitly adhered to; on the contrary, considering the dimensions in length and breadth necessarily given in order to procure the required draught, it appeared to be extremely desirable to make use of the whole space for purposes of accommodation, in lieu of leaving it unemployed, as had been done in the plan. In like manner we doubted the expediency of adopting rudders of the construction given in the design of Captain Cowles, and were not disposed to require the same precise lines to be followed for the bottom and sections of the vessel. Leaving these points to be settled by the Marine Board in consultation with the builders and professional men whose services were at their command, we contented ourselves with requiring the Board to invite tenders to build a vessel of nearly the dimensions of that of Captain Cowles, and with the same principle of trussing beams for the support of the engine, &c., but with such improvement of form, &c. as the experience and professional information at the command of the Board might enable them to suggest. The Board were, however, in determining on these improvements, to bear in mind that it was desirable the work should be put in hand without more delay than might be unavoidable for consulting those in whose opinion on such subjects they had confidence.

37. With respect to the engines to be used in the vessels so constructed, it was our intention, when the construction of the vessel might be sufficiently advanced for the purpose, to transfer the engines either of the Hooghly or Burhampootur into her, unless your Honourable Court, acting upon the communications heretofore made, or those intended to be addressed to you, should determine to send out engines of equal or higher power,

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and on the Rivers
of India

power, for the specific purpose of adaptation to tugs of larger dimensions and less draught than the two river steamers now in use.

38. In order to enable ourselves to submit a specific indent for steam-engines adapted to such vessels, we ordered the Marine Board to communicate to Captain Forbes, superintendent of steam-engines, the substance of our resolution, and to consult with him as to the plan upon which the vessel ordered to be put in hand should be constructed, so as to enable that officer to furnish a distinct report or memorandum, specifying the power, description, and dimensions of the engines to be obtained from England. But we desired the Board to bear in mind, that if not received in time the vessel must be so constructed as to admit the engines of one of the present steamers, altered of course so far as might be necessary, that is, in the length of the paddle, shaft, &c. Of the expense of such alterations Captain Forbes was to submit an estimate, to be included in that of the expense of constructing a new vessel on the principle described, and to be forwarded by the Board with the tenders that may be received for the work.

39. In conformity with these orders the Marine Board appointed a committee to consider the propriety of putting in hand a river steam-tug, upon the model of Captain Cowles's plan. Their deliberations ended in a request made to Captain Cowles that he would construct a model, which was readily undertaken by that officer, and in the meantime the attention of other gentlemen of science and ingenuity was invited to the subject.*

40. On our proceedings, recorded in the margin,† is a report from the Marine Board, forwarding various opinions on some of the principal questions involved in the discussions which had taken place; they were chiefly given by professional gentlemen consulted by the Board, *viz.*, Messrs. Kyd and Mackenzie, ship-builders; Mr. Seppings, marine surveyor; Captain Forbes, engineer and superintendent of steam-engines; Messrs. Jessop and Co., iron founders; Commodore Hays and Captain D. Ross of your Bombay Marine; Captain Johnston, late commander of the *Enterprize*; and Captain Collic of the Master-Attendants's office. These documents will be found at length on the proceedings of the Marine Board, the abstract of them only being recorded on our consultations.‡ As we had determined to wait for the construction of Captain Cowles's model, we did not deem it necessary to take any immediate measures upon these reports.

41. In the interval of the model's preparation, the Governor-general having determined to make short excursion towards Benares and Goruckpoor the steamer *Hooghly* was a third time ordered on a voyage up the river, it being his Lordship's intention to make use of her for his conveyance back, so as to give him the opportunity of ocularly witnessing her qualifications for river navigation as well in the great river as in the passage of the Sunderbuns. The Governor-general embarked in the *Hooghly*, with a pinnace in tow, at Mongeer, on the 7th of March, and arrived at Calcutta without any material accident on the eighth day, *viz.*, on the 15th of March last. The official report of this voyage, just received from Mr. Wall, is annexed as a number in the packet.§

42. Very shortly afterwards Captain Cowles's model, being ready, was submitted by the Board to our inspection, with the opinions of the Committee who had before been assembled to examine the plans after the reward had been adjudged to Captain Cowles.

43. With reference to the letters of the Marine Board, recorded on our Consultations as noted in the margin,|| the Governor-general laid before the Board a plan by Captain Forbes, with estimate by the master-attendant, for a steamer with one engine of smaller dimensions than before contemplated. In explanation of the reason for so material a change, the Governor-general further submitted a memorandum from Captain Johnston

of

of the result of two experiments made by his Lordship's orders with the Hooghly steamer, working with one only of the engines with which she was provided.

44. The experiments affording reason to believe that the power of the double engines of the Hooghly and Burhampoor exceeded what, with allowance for the lighter vessel and smaller draught of a tug with a single engine, would need to be applied, his Lordship gave encouragement to the idea of constructing an experimental vessel on this principle. The plan and estimate laid before the Board were prepared in consequence, and submitted for our approbation.

45. Amongst the arguments in favour of an experiment of this description, in preference to constructing a larger vessel adapted to the present double engines, were the following, which appeared to us conclusive:

First. That any vessel working with a single engine will, if successful, be smaller, more manageable, of less draught, and better fitted for the narrow channels of the Sunderbuns and other rivers than the much longer and broader vessel required for two engines.

Second. The cost of the experiment will be not much more than half the charge of constructing the larger vessel.

Third. If successful, Government will have double the number of vessels with the same engines, and the two present river steamers may be converted into accommodation vessels, to be towed. If not successful, the single engine taken out for the present experiment can be replaced, leaving the existing steamers as they are, and converting the new vessel into an accommodation boat.

46. Influenced by these considerations, we resolved, at the recommendation of the Governor-general, to order the Marine Board to put in hand a vessel of the reduced dimensions, and according to the plan prepared by Captain Forbes. We also desired, unless upon examination of the estimate the Board should see reason to think the terms extravagant, or should find the calculations and rates assumed to be incorrect, that Mr. Kyd should be instructed to build a vessel thereon with the utmost dispatch, so that the same might be completed in three months from the date of commencement.

47. A subsequent communication from the Marine Board informed us that Mr. Kyd had undertaken to build the experimental vessel (stores and fittings not included) for 25,000 rupees, in three months;* and on these terms we ordered an engagement to be concluded with him for the work.

48. Copies of the correspondence here alluded to, and of the other papers referred to in the above letter, which are recorded on our proceedings of dates not already forwarded, are transmitted in the present packet.

49. Your honourable Court will perceive that the result of our measures in respect to river steam navigation, so far as they have yet gone, has been to determine on the construction of a light tugging vessel, drawing not more than eighteen inches water, and working with one only of the low-pressure twenty-five horse power engines now employed in pairs in the Hooghly and Burhampootur. We look upon this experiment as promising, if successful, to extend our existing means with most advantage, and economy will be perceived to have influenced mainly the determination to prosecute the measure in this form.

50. The information we possess regarding improvements making in Europe in steam-engines is too limited, and of too old date, to warrant our submitting any specific indent for machines of a different kind from those now in our possession; but we beg of your Honourable Court to cause intelligent professional men to be consulted as to the most proper engines for the purposes we have in view. They must be such as combine

power

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Government ;
18th May 1830.

power with lightness and a comparatively small consumption of fuel, so as to be available for tug or other vessels drawing little water, in a voyage of considerable length on the rapid rivers of the country. Should any machines of superior construction to those we have in use be invented, or be otherwise procurable in England, we hope your Honourable Court will accede to our request that we may be furnished with several of them at an early date.

Fort William,
18th May 1830.

We have, &c.
(Signed) W. C. BENJINCK
W. B. BAYLEY.
C. T. METCALFE.

(9) Letter from
Capt
J H Johnston to
H T Prinsep, Esq ,
24th Nov 1828

(9).—LETTER from Captain J. H. JOHNSTON to H. T. PRINSEP, Esq., Secretary to the Bengal Government, dated 24 November 1828.

Sir :

In a letter, dated the 17th instant, I had the satisfaction to report to you the safe arrival off Calcutta of the Honourable Company's steam-vessel the Hooghly, from the experimental voyage to Allahabad, in prosecution of which she had left the Coolie Bazaar at eight A. M. on the 8th September.

I have now the honour to submit to you a report of the circumstances of the voyage, with remarks on those points to which my attention has, in obedience to your letter of the 7th of August, been directed, and in general upon whatever has appeared to me to be worthy of notice as connected with the object of the voyage

On the morning of the 8th September the Hooghly started from the Coolie Bazaar. The coal-boxes, containing 501 maunds, were filled, and there was stowed on deck 302 maunds of coal; the stores, and the weight of provisions, ballast, &c. was estimated at 20 tons, and the draught of water was, aft 3 feet 10 inches, forward 4 feet 6 inches; an excess beyond her best trim of 10 inches, causing a diminution of her speed of at least one mile per hour, a consideration of vast importance, as it bears a proportion of one-third nearly to the average rate of our progress up the Ganges; nor were we completely relieved from this excess of draught during the voyage to Allahabad, for on the third day I found it necessary to purchase wood, though the boxes were still full of coal; and after leaving Rajmahl, from the short intervals at which we overtook the coal-boats, our deck was constantly loaded with that article, and we arrived at Allahabad with the boxes nearly full.

The Hooghly had not passed Fort William ere we discovered that much annoyance and anxiety would arise from the insufficient command of the helm over the vessel, and the difficulty of steering her at all times: in the hope, however, of remedying this evil by the adaptation of a rudder similar to that used by the budgerows, we proceeded, and took the earliest opportunity of putting this means into practice, which, although when adjusted it had all the effect we could expect, was from its liability to get out of order the cause of much delay during the voyage.

We left Calcutta on the 8th September, and arrived on the

11th ditto	...	...	...	at Moorshedabad,
14th ditto	...	...	...	Rajmahal,
18th ditto	...	...	...	Mongher,
22d ditto	...	...	...	Patna,
26th ditto	...	...	...	Ghazeepore,
28th ditto	...	...	...	Benares,

having

having steamed a distance of 798 miles in 239 hours and 57 minutes,* making an average progress over the ground of $3\frac{1}{2}$ miles per hour, nearly the average rate of the current, and I think six miles per hour below Ghazee pore, and above that place a little more than five; our progress through the water was about seven miles per hour.†

The quantity of fuel consumed was, of Burdwan coal	...	...	2,215
Of wood, 408; equal to coal ‡	...	...	80
Total consumption of fuel	...	...	2,325

Having experienced some difficulty in finding our way to Allahabad from the village of Lohom, about six miles below the fort, Lieutenant Smith of the Engineers kindly offered to send a sergeant, who had been previously employed on a similar service, to sound through the proper channel. His report of the depth of water (given in inches) was extremely favourable, and on the 8th we weighed on our return to Calcutta, Lieutenant Smith's sergeant leading in a boat a-head.

At a distance of nearly six miles from the fort the signal was made from the sergeant's boat for being in shoal water, and the Hooghly presently took the ground; the anchor was by my direction let go, and the vessel swung with her head up the stream, being in her own water nearly, and the cable a-head preventing the ship from driving further on the sand.

I left the ship in search of a channel, and during my absence the sergeant made a signal for deep water. The Hooghly was got under weigh, and in trying to close with the sergeant's boat, got on the spit of a sand and hung there. On reaching the vessel again, I put every means in practice (as detailed in a note at the end of this report §) to get the ship off, and at two o'clock on the 4th we were again able to proceed on our voyage; and to prevent as much as possible future accidents it was made a standing order that the moment the water should be under two fathoms the anchor should be dropped and the boat sent to lead the ship, when however the boat was a-head showing the water, she might be followed at discretion.

With this precaution we reached Calcutta, touching only once more; it was in passing between two sands when, seeing the strong current close to us, in the hope of deepening the next cast we hesitated one minute dropping the anchor, and the next were carried on the spit of a sand; the anchor was instantly let go, and in sounding in the boat we found three fathoms water within twenty yards of the vessel. Preparations were instantly made to carry out an anchor, which was rendered unnecessary by the vessel sheering into deep water, on bringing that anchor a-head* which had been previously let go.

After

				Distance.		Hours Steamed	
				Miles.		Hours.	Min.
* September 11,	Moorshedabad	..	..	161		45	10
— 13,	Rajmahal	..	..	89		24	54
—	Mongher	..	..	123		39	7
— 20,	Patna	..	..	87		28	46
— 25,	Ghazee pore	..	..	131		42	46
— 27,	Benares	..	..	66		20	15
October 1,	Allahabad	..	..	141		38	59
				798		239	57

† Vide Note (B) p. 955.

‡ Note (D.) p. 955

§ Note (A) p. 954.

APPENDIX,
No. 25.
continued

(9) Letter from
Capt.

J H Johnston to
H T Prinsep, Esq.
24th Nov 1828

After leaving Allahabad we found that one boiler would supply as much steam as we could with safety venture to use, it was sufficient to work from sixteen to eighteen strokes continually, and from our imperfect knowledge of the river even this rate was sometimes found too great.

After entering the Bhagiratta, from the facility of the navigation in that river and the Hooghly, we were enabled to put on the full power.

From the village of Lohoiug, six miles below Allahabad, where the vessel on her return voyage had first taken the ground, we started on the 4th October at 2. 35. p.m. being six miles, or one hour and 25 minutes below Allahabad.

		Distance	Hours Steamed.	
We left on		Miles	Hours	Minutes
Oct. 3	Allahabad .	119	15	20
-- 6	Chunar . .	22	3	20
-- 8	Benares	66	9	52
-- 9	Ghazeepore .	259	20	13
-- 11	Dinapore .	99	39	25
-- 15	Rajmahal .	89	12	30
-- 16	Moorshebad . .	161	20	15
		815	121	35

Having returned at an average of less than seven miles per hour; on some occasions we went at the rate of ten and twelve miles per hour, on others, as in cases of shoal water, narrow passes, &c. we were obliged merely to drop at the rate of one or two miles per hour.

The experience of the voyage leaves me confirmed in my belief that the Ganges may be advantageously navigated by steam vessels. Much however has been said to me on the difficulty of finding a channel in the dry season, and though I believe that like other obstacles this one would vanish before perseverance, I think it very desirable to make another experimental voyage in the driest season; and being experimental, it may be made with advantage through the Sunderbunds.

The difficulties, fewer and of less magnitude than I had been led to expect, arose principally from a want of knowledge of the river and the channels. From the great strength of the current we generally managed to escape by going along the edges of the sands. Had our knowledge of the river been more perfect, we should have avoided it more effectually. The eddies and whirlpools were the second and last source of difficulty, and from these with a vessel under better command of the helm we should have experienced much less inconvenience. The voyage was undertaken at the most desirable time for experiment, at the least so for facility and expedition; it was commenced at a period of the year when the current is said to run at its greatest rate, though after passing Ghazeepore the rapidity of the current was on an average less by at least half a mile per hour than we had experienced it below that place.

The return voyage was performed during the most unsettled state of the river, at a time when the waters had begun to subside, but before they had fallen into and formed a regular channel.

At Rajmahal and Colog the river had risen 28 feet, and within a foot and a-half of its greatest height. At Benarès it had risen 34, but had not attained within 11 feet of the maximum;

maximum ; at Allahabad the rise had been 29 feet, 13 short of the greatest height ; and supposing the velocity of the current to be uniform throughout the river when the rise has at all places attained its greatest height, and the plane of its surface to decline regularly towards the sea, it will be represented by a line thus, whereas under the irregular rise of the present year it would be represented by a line thus, which would readily account for the diminished velocity of the current above Ghazee-pore ; and I regret that from the same reasoning it must follow that in a year of great rise the current would be generally stronger than we experienced it.

Supplied as the Ganges is by many tributary streams, whose contributions must depend so much on local circumstances, its peculiar irregularities are easily accounted for ; notwithstanding these a registry of the rise and fall of the river at many different stations may, after some years' observations, afford the means of calculating what will probably be the rapidity of the current between given places under known circumstances ; a knowledge which on many occasions would be useful ; as, for instance, serving to regulate the stations and distances of the floating depôts, which should extend or decrease with the changes in the velocity in the current, so as to be as nearly as possible a day's journey apart.

During the passage to Allahabad the S. E. wind prevailed, and sometimes blew very strong ; but, although a fair wind, it impeded rather than aided our progress, making the ship less manageable, and increasing the strength of the eddies and the turbulence of the waters.

The S. E. wind blew very fresh during our return also, and it generally prevails until the end of October, when the equinox passes without a strong gale, otherwise the westerly winds set in towards the end of September.

The river is said to rise with westerly and to fall with easterly winds.

In considering the establishment of an extensive and efficient communication between Calcutta and the Upper Provinces by steam vessels, adapted to the various purposes of the Government, and to a passage at all seasons through one of the Nuddea rivers, the adoption of the high-pressure boiler connected with engines of the lightest description occurs as the only means of uniting in the same boat the three indispensable qualities, lightness of draught, speed, and capacity.

From all that I have read on high-pressure engines, from their general use with the Americans, and from the various means that are employed to prevent fatal occurrences, I see in them little liability to accident beyond that to which all steam vessels are through carelessness and inattention exposed.

Without any practical knowledge of high-pressure engines or boilers it would be vain in me to attempt to suggest the employment of any particular one rather than another. The question of preference must be decided by the first machinists in England ; and perhaps Mr. Gurney's boiler may be deemed worthy of patronage.

Leaving to the wisdom of Government to decide on the expediency of adopting high-pressure engines, I will venture to offer my opinion on the employment of the means already in its possession, and the time that must elapse before vessels can be procured in a manner calculated to advance in a very considerable degree the main object in view.

And first, it will be necessary to make some considerable alteration in the Burhampootee and Hooghly, which, as they have already had the approval of scientific gentlemen, I shall not hesitate to suggest.

Improvement in the steering of these vessels, a consideration of the first importance, may easily be accomplished either by adding to the sternpost, or by two rudders on the quarters, and perhaps by fixing a small rudder on the bow of the vessel, but for many very obvious

Ghazee-pore

APPENDIX,
No. 25.
continued.

(9) Letter from
Capt.
J. H. Johnston to
H. T. Prinsep, Esq.;
24th Nov. 1828

reasons it is desirable that the vessels should be made both ends alike, and be capable of riding at their anchors with equal safety by the head or stern. Should such an alteration in the present boats involve too great an expense, the means of anchoring by the stern may be provided by an out-rigger from one or both quarters, and the cable may be confined within a trunk, and lead along the deck to the windlass forward. In like manner, for the tiller ropes may be substituted long iron rods running outside the ship on friction rollers, and leading in upon the fore-castle, where the wheel should be placed; this arrangement would leave the whole space abaft the chimney to the uninterrupted occupation of passengers, whilst this additional advantage would be gained, that the helmsman would command a much better view of the river before him, and of any object to be avoided or steered for.

The accommodation, at present untenable and inefficient, may be relieved from the inconvenience of heat by reversing the boiler and bringing the fire-places abaft; a fire-room would then be formed distinct from the engine-room, and the draught being from aft to the chimney, little or no heat would be communicated to the cabin, more especially if double air-tight partitions were built, with one or two inches space between them.

The back of the boiler being brought nearly in contact with the cylinders, a saving of fuel would result from a much less quantity of steam being condensed than now is in its way to the cylinders, and the engines would be kept free from the dust of the ashes and coals, which is now a considerable inconvenience.

The after accommodations may be very much improved by making the height of the strength of the vessels abaft the main-beam to terminate at a line struck at five feet nine above the upsides of the floor-timbers, and by carrying at this height the beams of the main-deck across to project three feet beyond the side of the vessel, thus increasing the breadth six feet, or from eighteen to twenty-four.

Above this deck, or platform, a poop might be constructed of the lightest materials, similar to the cabin of a budgerow, which would still be considerably below the line of the paddle-boxes, and only five feet above the present deck; the dimensions of the accommodations under this poop would be thirty-four by twenty-four, the space below would form a hold of thirty by sixteen by six high, capable of receiving sixty tons of measurement goods, and in cases of emergency of accommodating troops.*

With respect to a space for an airy cabin, and for a voyage of no very long duration, fifteen or eighteen single officers might perhaps be accommodated thus:

* * * (Map.) * * *

If the accommodation be deemed sufficient for fifteen single officers, with not more than four or five servants between them (and it is, I believe, quite as spacious as in general allotted in an Indiaman), supposing it to be occupied by cadets going as far as Allahabad, and calculating the established rate of travelling time and money for that voyage at eighty per mensem for three months each, the vessel would earn Rs. 3,600

And allowing each officer ten cwt. of baggage, say eight tons, there would remain available for hire twelve tons, which at 300 per ton would yield ... 3,600

Total for the voyage Rs. 7,200

However high the charge may at first appear, when it is compared with the rates of heavy waggon charges in England, it will be found moderate. Between Plymouth and London the charge is, if I recollect right, five-pence per pound, the distance 280 miles.

Bullion, both gold and silver, when it can be procured, would pay well at a freight of one

one per cent. and would be a saving to the merchant of one per cent., but to what extent this article is exported to the Upper Provinces I have not yet been able to form an estimate; it is usually collected in small sums from different persons by the native insurance brokers, who forward it at a charge of one and a-half per cent. to Benares by land or water according to the season, and in both cases the voyage occupies from thirty-five to forty days. The steam-vessel would perform it in ten or twelve, which, calculating the interest of money at twelve per cent., would make a saving of at least one-half per cent. on that occasion.

The monthly expense of either vessel will be nearly as follows :

Fifteen per cent. per annum on the first cost of the vessel, for wear and tear and interest of capital sunk, assuming the original cost to have been 1,40,000 rupees, fifteen per cent. 21,000 rupees per annum; but as the vessel will probably be two months in each year under repair, the expenses must be calculated on ten months, which will make wear and tear per month	...	...	...	Rs. 2,100	—
Stores, not including coal	...	...	...	300	—
Commander's pay 150, provision 60	...	...	...	210	—
Officer's ditto 80, ditto - 60	...	...	...	140	—
Chief engineer's at present paid 250 and 60	...	...	...	310	—
Assistant (two engineers are not required)	...	...	...	140	—
Crew of twelve men at 12 rupees per month, including their provisions	...	...	...	144	—
Supposing a voyage to Allahabad and back to be performed, 25 days' fuel will probably be expended, at 100 mannds per day, at 10 annas per maund				1,562	8
				4,906	8

Say total expense of a voyage to and from Allahabad, occupying one month	Rs. 5,000	—
--	----	----	----	----	----	----	----	-----------	---

If the former calculation of the earning be admitted, the expense of the month would be covered by the voyage upwards, and the return voyage would be entirely profit.

After a few successful voyages the four cabins proposed would certainly let for as many thousand rupees each way;* so great a saving of time, and some saving in expense would be a strong inducement to forego the ample accommodation of a pinnace† for the sufficient one of a steam-vessel.

I come now to the consideration of a subject on which I think the success of the undertaking will very principally depend: I mean the organization of an establishment of pilots for the great river.

Whilst many parts of the Ganges near the debouchure of the different rivers, and particularly below Patna, are subject to continual changes, others above that city, and particularly where the stream is confined between bankur banks, remain as they were when Colonel Coiebrooke's survey was made. These places require little or more, than to be once well known to be navigated with confidence, whilst others will require constant observation and the most skilful pilots.

On our late voyage we were twice fortunate in procuring men who, having recently accompanied boats, were well acquainted with that part of the river through which they undertook the guidance of the vessel, and on these occasions our difficulties were fewer and our progress greater than under other circumstances.

The

* Each way, i. e. Rs. 4,000 for the four cabins (1,000 each) for the voyage up, and the same for the voyage down

† The hire of pinnaces to Allahabad varies with the size of the boat from Rs. 2,200 to Rs. 900, and of budgerows from 600 to 500.

APPENDIX,
No. 25.
continued.

(9) Letter from
Capt

J H Johnston to
H T Prinsep, Esq
24th Nov 1828

The usual method of piloting the country boats is for a small boat to precede the larger one half a mile, and by signal to give them timely notice of danger, and point out the course that should be taken to avoid it. It is very evident that such pilotage would be of no service to steam-vessels, nor do I believe that a mere order to the darogas and Ghaut managers to provide and prepare more efficient men, would be attended with any benefit, even though the encouragement of certain payment on a liberal scale should be held out for services to be performed.

I would suggest, then, the appointment of a superintendent, a person of energy, capable of enduring fatigue, and having at heart more the successful result of his undertaking than the receipt of his salary; to him should be entrusted the organization of a system of pilotage and a general observance of the river, its actual and probable changes, and, in communication with the zemindars and magistrates, the timely removal of trees or pukka buildings likely to fall into the river, the removal during the dry state of the river of small knowls of konkur rock or other obstruction from the fair channel, the protection of the channels or banks, when it may be done at small expense, and in the same way, with the previous sanction of Government, the division of the stream through nullahs, or its direction against banks and chers that would easily admit its encroachment, and through which it would in time make its way, to the improvement of the navigation; with other minor duties which need not be enumerated.

The principal, or at any rate the first to be undertaken, will be the organization and training of an efficient pilot establishment, and, without particular reference to deviation that local circumstances may point out as advantageous, I will suggest that generally the knowledge of the pilots shall not be required to extend beyond twenty miles in the great river. In the Bhagiratty and in the Jellinghee, if its navigation be equally simple, pilots would hardly be required after the first voyages.

Between the Bhagiratty and Allahabad twenty-eight stations would be required; and selecting from amongst the manglees and pilots at each station two of the most intelligent, with eight others for boats' crews, each pilot being provided with a very light canoe fitted as a life-boat, a perfect knowledge of the river would be very easily acquired.

The pilot should be examined by the superintendent, and by him instructed in the manner of placing buoys or landmarks in the most eligible and necessary places for making the crossing, and the passage between the sands, &c. The buoys and landmarks should be of the most simple and least expensive materials, such as bamboos or long poles, gourds, logs of light trees, &c., with burnt clay, stones, rock, &c., and fastened with rattans, twisted fibres, reeds, &c.; these it would be a chief duty of the pilots to place; landmarks should be preferred to buoys, being less liable to accident, and would always answer where the river is not very wide.

In the first instance it would be necessary to pay these pilots a monthly salary, and when sufficient boats were established to admit of their earning a livelihood by their constant employment this system might be continued or not.

I think in the first instance, in addition to a small pilotage to be allowed for each vessel safely conducted, a monthly salary of five rupees to each pilot, and two and a-half to each of the crew, who should all be considered as persons in training for pilots, would ensure the services of intelligent men. The canoe or boat must also be provided at the charge of Government.

I will close this report with a few suggestions for the conduct of steam-vessels in the Ganges.

It is eminently necessary that the vessel should be under complete command of the helm; she should be provided with two bower-anchors, the one sufficiently heavy to ride her under ordinary circumstances, the other capable of holding her with a short, say fifteen fathoms, scope of cable in a strong tides'-way, and over the stern should hang a similar

Similar anchor, to the lightest bower, a kedge-anchor, and two grapnels with sixty fathoms of a good five-inch hawser; a two-and-a-half tow-line and a coil of whale-line would complete the ground tackle. She should be supplied with two boats, one a small light boat, to be hoisted abaft the paddle-box, the other to tow astern, a boat capable of carrying out a bower-anchor and fifteen fathoms of chain, both fitted as life-boats; and thus provided the vessel would be well prepared for getting off a sand in case of accident.

When the vessel is weighing, from the moment she is short a second anchor should be ready for letting go, to prevent any accident that may arise from the engine not starting, or other causes to which a ship in a tides'-way is always exposed, and it is desirable to have a hand constantly by the anchor.

The greatest attention to the helm and a most vigilant look-out will be required of the officer in charge of the deck; and however confident of his channel, he should never be without two leads going, one on the quarter the other from a platform under the bowsprit.

Proceeding against the stream, should the water shoal, it will be a natural inference that the ship is running up to a sand, and the engine should be slowed in time or stop, according to the strength of the current.

When running, to avoid the current on the edge of sand around a projecting curve, should the water shoal, try immediately towards the strong current and deepen, and be careful not to leave any still water and smooth between the vessel and it, or you may get between sands with knowls upon them, or into a *cul de sac*, and find it difficult to get out again. Sands are not unfrequently disposed thus:

Should the water shoal very suddenly from four or five fathoms to one or one and one-half, presumption would be that the vessel had got on a cher or tsield under water, and she should be taken off immediately, and tied to the opposite side of the channel; such a circumstance would be likely to occur at a place near Blierya, where the channel runs thus:

In general the strong current runs on the concaved bank, and as the reaches vary, it is necessary to cross from side to side of the river; the crossing requires the most particular attention: with this the channel may generally be distinguished, and the broken appearances of the bank, with which the eye soon becomes acquainted, is a sure indication of its course.

On anchoring at night, on approaching the shore, care should be taken to avoid eddies: the strong current will of course be avoided as much as possible.

It is always very desirable to have some landmark by which it may be seen if the vessel drives or ports; and when it is considered that such an accident would in all probability be fatal to the vessel, too much precaution cannot be recommended for her security during the night.

Descending the stream the greatest care will be necessary, and it will scarcely be safe to apply the whole power of the engine. With one boiler and half the ordinary consumption of fuel, an average rate of eight miles may be kept up, when the channel is known and when the current runs free.

At all crossings the engines should be slowed, and they should be taken at their highest point, for it would evidently be better to touch, on the tail than on the head of a sand; and in crossing between sands when the channel is not perfectly known, the vessel's head should be put up the stream, and the course be made as it were sideways, by edging over; in the event of shoaling within a fathom of the vessel's draught, the anchor should be immediately dropt, and the boat sent to explore.

In the event of the vessel touching a sand, unless she be on the tail of it, the anchor should

APPENDIX,
No 25
continued

(c) Letter from
Capt.

J H Johnston to
H T Prinsep Esq.,
21th Nov 1828

should be immediately let go either ahead or astern, according to circumstances, and every means should be exerted to get her head or stern up the stream and to secure her from driving; for if the current runs over the sand and the ship is prevented from drifting further on, the probability is that in a few hours the sand would be washed from under her, and a gentle motion of the engine would assist much in dispersing it.

In fine, the safety of a steam vessel's navigation on the Ganges will depend on a good look out, with the proper use of the lead and the anchors.

I have, &c

Calcutta, 24th November 1828.

(Signed) J. H. JOHNSTON

Note (A).

The ship having swung to her anchor, and not being in a situation to receive any damage, I took the pinnace to sound and discover a passage. The pilot-boat made the signal for having three fathoms water when I was within a cable's length of her, in three feet, in a line nearly between her and the ship. I endeavoured, but in vain, to pull round the spit of the sand which lay between us, to find the proper channel for the Hooghly; the current was too strong to make head against it, and pulled in shore, deepening gradually into two and three fathoms, which made it widest: there were two channels, one on each side the sand. I was now abreast the pilot-boat in two and a half fathoms, with the sand between us, and I observed the Hooghly under weigh, endeavouring to near the pilot-boat. I feared she would get into the shoal water I had just passed, but had no means of desiring she would anchor: presently she took the ground and swung broadside to the tide. I was some time reaching her, having to track the boat up in shore. When in a position to make the vessel, I put off, sounding down to her; within a small cable's length I found one-quarter one, and close to her five feet six inches; this water would float her, and it was very desirable to get her into it.

On arriving on board I found the vessel had taken the point of the spit, that we hung amidships, where the sand appeared dry above water; and that there was five feet water under the stern and six under the bow. After ordering a grapnel and coil of rope to be put into the pinnace, I wrote to the magistrate at Allahabad, Mr. Brown, for boats to receive our stores, should it have become necessary to lighten the vessel; throwing coals overboard for this purpose was out of the question, as they would have formed under our bottom a hard and dangerous bed.

I went with the pinnace and laid a grapnel about two-thirds a cable's length on her starboard bow, off the cat-head, the vessel being on shore on her larboard side; by means of the grapnel rope (of which we made a guess-warp) we handed out first a kedje and four-inch hawser, and by that the best bower and forty fathoms of chain; on account of the rapidity of the stream, running five knots, this occupied several hours. At five o'clock we began to heave, and having brought the ship's head up two points, set on the steam, but found that we only forced the ship along the sand, an effect not desirable, as it was likely to injure the copper; we also appeared to bring the anchor home. My object was, even if I could heave off, to bring the vessel's head up the stream, but being hung amidships, this could not be accomplished against a strong current with the purchase we had; the anchors were not sufficient to hold against the strain we could heave.

The vessel was now so situated as to receive the stream of the current at a right angle with her beam, and I considered that if her stern could be brought a little up, the stream taking her abaft the beam, it must, if it moved her at all, move her in its own direction round the sand.

To effect this, the kedje and grapnel-ropes were taken in over the stern and hove well

well taught : the result justified the expectation ; the ship gradually changed her position during the night, until on the morning of the 4th at two o'clock she swung to the bower anchor in five feet water ; at day-light we set on the steam and sheered into two fathoms, where we let go the small bower and sent one of four boats sent by the magistrate of Allahabad to our assistance to weigh the best bower. Unfortunately as the ropes on the kedge and grapnel were taken in a boat to be under-run, they parted, and could not be recovered by creeping or sweeping. At 2 p.m. we proceeded on our voyage.

Note (B).

A rate of progress through the water of seven miles per hour against a current of five would allow only an advance of two ; but we avoided the strength of the current by going on the edges of sands, and occasionally through nullahs and small channels, the average rapidity of the current is merely therefore a matter of conjecture, and its rate was accelerated or diminished according as it flowed through confined channels, or over a broad expanse

Note (C).

It is unnecessary for me to point out how these alterations may be effected without weakening the vessel or increasing her draught, but if my opinions on the subject are required, I shall be happy to give them.

Note (D).

Calculating fifty square feet to the ton measurement, the space 34 by 16 by 6 is capable of receiving sixty-four tons of goods, but the limit of the weight that may be stowed in it is twenty, and on this weight I have made my calculations for returns.

(Signed) J. H. JOHNSTON.

(10.)—LETTER from Captain THOMAS PRINSEP, Engineer, to H. T. PRINSEP, Esq.,
Secretary to the Bengal Government, dated 1st November 1828.

Sir :

AGREABLY to the orders of the Governor-general in Council of the 7th of August last, I do myself the honour of addressing to you the following observations upon the result of the experimental voyage to Allahabad in the Honourable Company's steamer Hooghly.

I have hitherto delayed to submit my reports, in the hope of being enabled to transmit at the same time corrected charts of the river, prepared during the voyage, upon the basis of Colonel Colebrooke's former surveys, which might I thought prove of greater utility than any verbal instructions or journal of the expedition, in all future voyages of the same nature ; other duties, and the labour of preparing such charts on a large scale for a distance so great as eight hundred miles, have prevented my accomplishing the task in the time I had anticipated, and I shall therefore no longer withhold what remarks I may have to submit regarding the expedition, and the grand object of establishing a communication with the Upper Provinces by steam, reserving such particular observations as apply more particularly to the river in detail for a future memorandum, to accompany the charts when prepared.

The expedition started from Calcutta on the 8th of September, reached the great river, entering by a mouth formed of late years opposite Choka, on the evening of the 12th, having passed from Calcutta through the Bhagirattee or Moorshedabad river, the distance two hundred and thirty-two miles, in fifty-nine hours of actual steaming.

(10.) Letter from
Capt T Prinsep to
H T. Prinsep, Esq. ;
1st Nov 1828

APPENDIX,
No. 25.
continued.

GENERAL STATEMENT OF PROGRESS.

(10.) Letter from
Capt T. Prinsep,
1st Nov 1828

	Distance.	Time going.	Rate per Hour.	Time Returning	At rate Miles.
	Miles.	Hrs. Min.		Hrs. Min.	
Calcutta to Choka Mouth ..	232	59 0	3 $\frac{9}{10}$	25 49	9
Choka to Patna	248	78 20	3 $\frac{9}{10}$	46 27	5 $\frac{3}{10}$
Patna to Ghazee pore ..	127	42 36	3	21 25	5 $\frac{9}{10}$
Ghazee pore to Allahabad ..	200	59 24	3 $\frac{3}{10}$	33 43	5 $\frac{9}{10}$
Total Miles	797	239 20	3 $\frac{3}{10}$	127 15	6 $\frac{4}{10}$

The whole distance as by the foregoing statement has been performed in something less than twenty days of twelve hours each actual steaming; and the average rate per hour of her ascending voyage is thus something less than three and a-half miles. The steamer reached Allahabad on the twenty-fourth morning of her voyage, and returned to Calcutta in safety in ten days and seven and a-quarter hours of steaming, days of the same duration of twelve hours. I have divided the voyage in the above manner to assist the following remarks; but as a view of the daily performance of the Hooghly may be instructive, I annex a statement showing each day's anchorage, the work done, and hours of steaming, with remarks as to the reasons of the great difference as well in the hourly average of progress as in the daily run.

The first division of the voyage, 232 miles, from Calcutta to the mouth of the Moorhedabad river Bhagirattee, exhibits an average rate of progress exceeding that of any following. The navigation of this division bears a totally different character from the rest. Our passage in ascending happened when the current may be considered at its extreme of velocity, and the surface of the water appeared to be within very little of its extreme elevation.

The utmost average rate of our progress for any connected time in any part of the Bhagirattee, against the stream, was four and a-quarter miles per hour; the average general rate was three and a-half; and as our actual speed, making due allowances for the additional resistance when the course is so winding and our steering imperfect, could scarce have exceeded seven miles per hour average, this will leave for the average extreme current of the Bhagirattee in September three and a-half miles per hour, and there are particular places where it reaches five miles per hour.

This average velocity of three and a half miles per hour decreases gradually from the middle of September with the fall of the river, nor is the velocity increased again by any later adventitious rise of the waters. On our return in the middle of October, we found the waters within very little (scarce two feet) of their height in the middle of September, the wind then blowing hard from the south-east. The average current at this time was evidently rather short of two miles per hour; while the river is in this state, with the water high and current slack, the navigation is of course most favourable for steamers in every point of view, and we were enabled to perform what, perhaps, might have been imprudent if not impossible in any other state of the river, to steam at full power from the entrance at Chokah to the confluence with the Jellinghee at Nuddea, a distance of 156 $\frac{1}{2}$ miles, in seventeen hours, averaging an hourly rate of nine and one-fifth miles. If however this observed decrease in the velocity of the Bhagirattee while the waters are high during October is general every year, it must evidently be one of the chief reasons that the navigation is closed during the dry month.

It is already known that the passage of the Bhagirattee is closed against vessels of any draught

draught during many months of the year; the passage will in its present constitution be easy to steamers from the beginning of July to the end of October. In June and November, if the passage is at all practicable, the average progress of steamers, on account of the confined state of the channel and the caution necessary, will not exceed that attained when the waters are the highest, in August and September.

I have to regret that circumstances prevented our returning by the Jellingee, by which some comparison might have been made between the two streams, of which in point of general advantage the Jellingee has always been preferred.

The Bhagirattee has manifestly been improved since the surveys of Majors Rennell and Colebrooke, and the distance from Nuddea to Sooty and Choka appears to have been shortened by nearly ten miles: that it is still capable of further improvement is beyond a doubt, but it is still very questionable whether any means could be contrived to secure a sufficiency of water throughout the year in this stream.

In the second division of the voyage, from the head of the Bhagirattee, distance 248 miles to Patna, the average progress shown by the statement was less than in any other division. The general velocity of the current was found the greatest in this portion of the river: the bed of the river appears most subject to changes, and the expanse of water being more considerable the winds are more violent and of greater impediment to navigation in any but a well-found and strong-built boat. In this part of the river, however, happily there is a more frequent occurrence of side channels, by which vessels of all kinds and also steamers may escape the fury of the greater branches of the river, and navigate in comparatively slack and smooth water: such channels are necessarily available only during the height of the river in July, August, September, and sometimes October; but in the other months, from the waters being low, vessels are protected from the wind by the height of the banks, and the diminished velocity of the current in these months gives them the same advantage in point of speed as the side channels when the river is high.

Want of proper pilots and ignorance whether such channels afforded sufficient water for the draught of the Hooghly, compelled us in general to follow the main stream in our way up, and by way of avoiding the main strength of the current, to keep the shelving side, feeling our way in about two and a-half and three fathoms of water. There was perhaps as much danger (if there was any in either case) in following such a course as in attempting a side channel, with only a dubious assurance that there was a path open to us, and a vessel following such track will always have to contend against a stronger current than in a side channel, but where, as in our case, no pilot of any trust could even inform us generally of the nature of such side channels, the track followed was evidently the most secure and judicious.

Future voyages at the same season will probably exhibit a much more favourable result, and I anticipate that sixty-two hours steaming will, after a very little experience of the proper track to pursue, be sufficient for the passage from the head of the Bhagirattee to Patna in the height of the river, less when the waters are low. In the present expedition the two days which exhibit the most favourable progress were the eleventh and thirteenth; during both these days we had the advantage of side channels, and on the last day (thirteenth) the additional advantage of an experimental pilot.

In this part of the river there is no fear of the navigation being shut against steam vessels at any period of the year; the channel is here, it is true, subject to more changes, sudden and considerable, than in the other parts, but is always deep. The particular parts subject to change will be pointed out in the charts. The many occurrences of anything like permanent banks in our route were from Rajmahal to Colgong, a short distance, near Boglipoor, the Janguery rocks and Monghir; and generally in all the seplaces, the opposite permanent bank is so remote, and the interval filled up with low plains and islands (chur-) of such untenacious quality, the substratum being universally pure river sand, that it would be almost impossible in any place where these permanent banks are washed by the main stream, to keep it in such a course by any of the usual methods of preserving rivers in their

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beds, and the problem is of course much more difficult where the course of the main stream lies solely between islands of this unstable description. Majors Rennell and Colebrooke well describe the formation and quality of these churs.

The third division of our voyage between Patna and Ghazeepore, 127 miles, is likewise subject to the same remark, the want of permanence in the channel and want of stability generally of its banks. The permanent bank from the mouth of the Gogan or Dewar at Mainyeeghat,* by Revelgunge, Chuprah, to Cheeran, is now only washed by the main stream at Revelgunge and Cheeran.

The right bank of the river is remote and of very light quality, and the river rushes in a straight course and very rapid current between sand and islands of its own recent formation, from Revelgunge to Cheeran and from Cheeran to Dinapore, below the outlet of the Soane. Above the mouth of the Gogra the appearance of the river somewhat alters, and the fury of the stream is somewhat abated. The banks hence to Buxar being of light alluvial quality, have suffered considerable changes since the survey of Major Colebrooke, but they have been of a less sudden and extensive nature than the changes of the division below Patna. At Buxar there is every appearance of stability in the bed and banks, and the navigation is in every way easy.

Above Buxar the river has again expanded itself over a large extent, and the bed is of a very shifting nature hence to Ghazeepore.

The Ghospore creek above Buxar is the only side channel we were enabled to follow in this division; having therefore had generally to struggle against the main stream, our average hourly progress was somewhat less than might have been expected against what was evidently a diminished current.

During the return voyage our average progress was likewise slower than might have been expected, on account of some difficulty in the Buxar reach and above the outlet of the Gogra.†

The confluence of the two rivers Gogra and Soane frequently, by the check that their sudden freshes create, render the vicinity of their outlets shallow and difficult to navigate, from their uncertainty; but, generally speaking, I anticipate that nothing will ever occur which will offer insuperable difficulty to the passage of steamers at all seasons in this division of the voyage.

The last division of the voyage from Ghazeepore to Allahabad is in every respect of a different character from the preceding. The places where the river has expanded itself over a surface beyond what is required for its channel, are now of less frequent occurrence; the lofty banks of its red clay alternating with occasional strata of kunkur and other stiff clays, at the same time that they give an appearance of comparative sterility to the traveller who has just left the lower districts, convey an impression of wall-like stability sufficient to defy the utmost fury of the Ganges, which is here occasionally straightened to unnatural dimensions, and follows frequently a curvature apparently inappropriate to the magnitude of the following stream.

The river in this division may be considered permanent in all respects but in the depth of its channel.

Our progress in ascending this part of the river was easy, and attended with a very satisfactory general average in the hourly and daily rates.

The current, however, was by no means at what may be called its greatest violence, and our track universally lay in the main stream, and frequently in the strongest part of the current; our return through the first part of this division was accompanied with much delay, from causes which I will proceed to explain.

In

* • The most violent of the tributaries of the Ganges.

† Below Buxar.

In these upper parts of the river Ganges the variations of the water level,* as might be expected, are much greater annually and daily than in the lower parts. At Benares the extreme known rise is 45 feet, while in other years (as the present year) its waters only reach 34 feet; at Allahabad the extreme is 45 feet, while in other years (as the present) it only reached the 29th; at Colgong its extreme rise is 29½ feet, while in the driest seasons it rises above the 28th; at Jellinghee the variation is, I believe, only between 27 and 25½ feet.

The same remark also applies to the daily variations of rise and fall; at Allahabad the river frequently rises twenty feet in five or six days, and falls as rapidly; at Benares its rise and fall is somewhat more gradual, although still subject to considerable and sudden variation; at Colgong, on the contrary, although the date of the first rise of the river is subject to some uncertainty, when once risen, the indigo and rice cultivator knows exactly how to judge of the fall and period of the waters; sudden and unexpected rise or fall at Allahabad would incommode none but the boatman who had been incautious in the selection of his place of anchorage, one single foot of extraordinary rise or unexpected variation of the surface at Colgong or Jellinghee might inundate vast districts or destroy whole crops, either by inundation or withholding the supply of water necessary to their growth.

I mention this not as a new discovery, or in any way contrary to the laws of rivers, but in order to explain some circumstances which struck my attention in the nature of the sands and shoal channels below and above Allahabad, and which a comparison of the water registers kept at the different points of the river above could explain.

It appears to me, on a careful view of the subject,† that during the first rise of the river, until it has reached its height, the currents in the upper division of the river, from Allahabad to Ghazee-pore, must invariably be found the strongest, and this velocity may last until the end of August, when the river has generally declined considerably.‡ From this date the velocity of the current must subside, although the waters generally rise again, and are subject to much undulation; between August and the 1st of October the currents will universally be found abated. In this state of things the channels fill, and the crossing places from one steep bank to another, always more shallow than the channel round the bend itself, choke occasionally, as we found, to a height of one fathom above the level at which they are known to remain in the dry season.

This principle seems to be most powerful in and about the equinoxes of September, when there is always a rise of the river below, sometimes extending to the upper parts of the river; and unfortunately the fall of the river after this period, which is sudden above, is not accompanied by an equally sudden fall below, so that the upper currents during this fall are not sufficiently rapid to remedy the evil.

The experiments of Captain Smith upon the velocity of the current at Papamow this year,

* Extreme Rise of the Ganges at					Rise in 1824.	Usually falls by 15th October to	Fell this, or by 1st October, to	Rise during September to Equinoxes to
				Ft. In.	Ft. In.	Feet.	Ft. In.	Ft.
Allahabad	..	..	..	45 0	29 0	6	14 0	22
Benares	..	..	..	45 0	34 0	10	22 0	28
Colgong	..	..	..	29 6	28 3	18	24 0	26
Jellinghee	..	..	..	27 0	25 9	20	22 6	25

(a) These two assumed; I have not the exact registers

† 20th August.

‡ It falls usually to fifteen feet by the 7th September; it fell in 1828 to twelve.

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No. 25.
continued

(10.) Letter from
Capt. T. Prinsep;
1st Nov 1828

year, show that on the 7th September, when the waters stood at eleven feet ten inches above their lowest level, the average rate was seven miles three furlongs. On the 18th September the water having risen to fifteen feet nine inches, the average velocity of current was three miles three furlongs, extreme four miles one furlong. The rapidity of the current appeared then to abate even below this till the 2d October, when the waters had fallen to thirteen feet nine inches, although the river had risen in the interior to twenty-two feet. On the 1st October the depth of water in the channel of the Papamow passage was left at only nine feet.

At the time these observations were made there appeared to be no unusual influx of water from the Jumna to account for such a check, and our own observation upon the currents below lead me to place every reliance upon the truth of the experiments.

This curious circumstance, on our return between Allahabad and Benares, frequently arrested our progress and created apprehension of our having deserted the proper channel, for in many crossing places, where in our ascending voyage we had found four fathoms, on our return we found only two, and two and a-half, sometimes even less; the water had not fallen two fathoms in the interior, and still had to fall upwards of two fathoms more, the known channel of the dry season in these places being known to yield one fathom at least.

If we had been sufficiently aware of this circumstance, or any means had been provided of certifying us of our being in the proper track, although it appeared so shallow, many an hour might have been spared in the return voyage; and if it could be so provided, steamers might advance with confidence at an average rate of eight or twelve miles an hour from Allahabad to Benares. But unless such is the case, the commander of every steamer will do wise to follow the plan adopted by Captain Johnston, of advancing at an easy rate of steaming, not exceeding two miles per hour with the current, drop his anchor in any case of gradual shoaling, turn with his head up stream and drift easily over the difficulty.

In the return voyage to Benares the steamer Hooghly might have been excelled, and I believe was so, by some native boats, her average progress not having exceeded five and a-half miles, and the current being nearly four.

It fortunately happens that in this division of our route, where these difficulties occurred in greatest frequency, ferries are also of constant occurrence, and I should humbly conceive that through the means of the local officers it would not be difficult to make an arrangement with the proprietors of such ferries to induce them to act as pilots to vessels on their voyage, as also to place a bamboo float-buoy of some simple construction to point out these crossings; care only must be taken that this buoy does not drift from its position with the shifting sands of the bed, or remain to mislead any passenger into a channel which has been choked suddenly by some cause.

The particular principle adduced as so highly detrimental to the navigation between Allahabad and Benares will, I conceive, apply still more forcibly to the parts of the river immediately above Allahabad towards Cawnpore; and in those parts of the river where by some accident or natural cause the river has expanded its bed beyond the width necessary to pursue a channel proportioned to its expenditure of water, it is not surprising that shallows are formed over which the river, after its decline, must rush with considerable rapidity, since before its fall the level of the bed was much above the low-water mark in the dry season, and it thus has to excavate a channel which must keep pace with the further decline of the waters.

I have heard it advanced that the current (partially of course) is nearly of the same velocity in January of some years as at the height of the river in August and September, but I should like to see the fact authenticated by experiment. Certain it is that it may well exceed what Captain Smith's experiments proved it to be during the September rise of this year, or average three and a-half.

The difficulties of the navigation of the Upper Ganges arise more from the cause ad-
duced than from any insuperable velocity of its currents.

The waters that are brought down by the Ganges, even from the place it leaves its
strong bed at Hurdwar, are represented to be at all seasons of the year coloured and full
of sediment, and it may be well said that the motion of sand along its bed, the corrosion
of its banks where their nature is yielding, and the formation of new channels and deser-
tion of old ones, is constant and unremitted.

To make a comparison between the Ganges and the Mississippi, the only river of
equal or greater magnitude upon which steam navigation has been introduced with
success, it is only necessary to compare the slope which the river has attained, and
which, for argument's sake, we will consider as the two limits to which steam naviga-
tion is carried on with certainty. The height of Allahabad above what may be assumed
as the level of the sea, by barometer, is 348;* perhaps, in reality, more for the distance
of 800 miles.† The average slope would thus be nearly five inches per mile, and as-
suming that the slope at Jellingee is between three and four, that at Allahabad must
have attained six inches per mile. I came to the same conclusion by drawing an in-
ference between the barometrical‡ levels of Benares and Futtighur.

In the Mississippi the height of the mouth of the Ohio is stated 300 feet above the sea,
that of Louisville therefore, 1,500 § miles from the sea, cannot exceed 350 feet. The average
being thus under three inches, it cannot be supposed that the river at Louisville can have
attained five inches.

It is therefore manifest that when steamers have navigated to Allahabad, they have
reached much beyond a parallel position to Louisville on the Ohio. I am aware that
steamers pass above this place, and are actually built and floated down in the height of the
river from as high as Pittsburg, but I cannot learn from any source that the navigation is
carried on with any certainty or success above Louisville and Cincinnati.||

The two rivers will not, I am aware, admit of a close comparison; for although both are
subject to permanent freshes, the Ganges, unlike the Mississippi, is chiefly fed by tropical
rains. We have no data to form any comparison with a more tropical river.

My own personal knowledge cannot finally determine the question, whether a vessel
constructed like the Hooghly, or even upon an improved principle and less draught of
water, will be able to navigate beyond Allahabad to Cawnpore at all at any season of the
year. Our having been deterred from attempting the Papamow shoal is by no means suffi-
cient to establish Allahabad as the limit to which the Hooghly could be carried with safety
and certainty. The period at which we had the option was perhaps the most unlucky in
the year. I have in my own mind no doubt, after being able to travel between Cawn-
pore and Allahabad from the 1st of July to the end of September, and returning without
being arrested by any insuperable difficulty. At other seasons I cannot speak with equal
confidence of her success.

The result of the present expedition has furnished sufficient data to prove both the ad-
vantage

	Fet.
Altitude by barometer of Benares	240
Add supposed difference of Benares and Allahabad	68
	348

† Taken from the limit of the tide.

‡ Vide Proceedings of Benares, obs. 1 of 1817.

§ Difference of Benares and Furruckabad, 290 feet; distance by Ramell 354 miles, which, with allowances, would
leave the general slope nine inches per mile between these two places.

¶ By the difference of elevation of the mouth of the Scioto and Pittsburg, distance 384 miles, difference of elevation
216 feet, the general slope between these places is nearly seven inches per mile. The river therefore must have attained
the slope of six inches per mile somewhere above the confluence of the Scioto and Ohio.

|| Vide Warden's Statistics of North America.

APPENDIX,
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continued.

(10) Letter from
Capt. T. Prinsep;
1st Nov. 1828

vantage and ease of steam navigation, in point of celerity and security, over every other method at present in use upon the Ganges. The trial was perhaps made under every possible disadvantage; the vessel having to struggle with the strongest currents in her way up, and in her way back, the river being rapidly on the decline, the daily fall of the upper river where the chief danger of grounding was apprehended, being by measurement nearly one foot *per diem*. That she has triumphed, even against such great odds, there can be no question; and the way in which she succeeded in extricating herself from the sands on the only two occasions of her touching the ground in the return voyage is evidence sufficient both of her strength and of the capability of such a vessel.

The manner in which this took place may perhaps be worth narrating. The first and most important accident of this kind took place only six miles from Allahabad, in a channel we knew to be intricate, but through which a pilot undertook to guide us, we grounded on a spit of sand, the current running at a rate of about four miles, and dropt our anchor at the moment of grounding. The current immediately acted upon the side of the vessel, and drifted us farther on the sand, and with our broadside to the current. In this position no power of steam could help us. We then hauled in our anchor till the bow pointed up stream. The steam succeeded immediately in extricating the vessel. Unfortunately we did not clear the sands, and grounded again without dropping our anchor. The vessel then sheered round as before, with her broadside to the stream, and appeared to settle in the sand, with a dry bank forming immediately below, and the current eating away a channel under our bow and stern. In this predicament, with much delay and some difficulty against such a current, we carried out an anchor up stream, but failed in hauling her head sufficiently to the stream to enable the steam to work with effect. We then before dark likewise attached other anchors to the stern, holding the vessel to the three anchors as it were on a pivot, with cables to the bow and stern. By dawn we found the vessel just at the lower end of the sand afloat, and riding to her heaviest anchor, the others just having parted. The distance of sand over which the current must have drifted us in the course of the night was five furlongs. The way in which it may be accounted for is simple, and need not be adduced. It is sufficient to say that there will be few cases in which, if a steamer takes the ground on her return in a rapid current of four to five miles, she may not, either by hauling up her anchor, extricate herself by power of steam, or in case of failure, manage by anchors, or some similar manner, to drift herself into the channel which must invariably form by the mere force of the current under her bow and stern, and thus free herself. Touching the ground in the way up the stream can never be of much consequence, and it is only necessary that the vessel should have strength enough to put them beyond the fear of injury from the current acting upon them in this manner, and to provide them with good anchors and cables and the means of sending them up the stream. I will now pass to the subject of the particular capabilities of the Hooghly steamer for the navigation to Allahabad, as also some few remarks upon the points which I consider to be most essential in the contriving of future vessels for the purpose. The particular construction of such vessels is too practical a question for one not himself a naval architect.

It is established by experiment that the Hooghly has strength sufficient to prevent any injury from grounding upon sand in a current of five miles.

It is also established that a speed of seven miles and a-half to eight miles is sufficient to ensure a vessel of four feet and a-half draught of water and less the average of three miles at the highest state of the waters in ascending the Ganges, and, by inference, a much greater average rate in the low state of the river.

It is established that the Hooghly, with some improvement to her steering, is not subject in her way up to any of the many dangers enumerated in the General Department Secretary's Minute as incidental to a voyage up the Ganges in the craft now generally in use; and that in her descending voyage she is only necessarily subject to that particular one of drifting upon a concealed sand bank, an accident which occurred twice, and from which she found a means of extricating herself, as future vessels may likewise, even if proper measures cannot secure them against such casualty.

It

It is established that the passage of a vessel with four one-eighth, or less draught of water, from Calcutta to Allahabad, need never exceed twenty days of twelve hours actual steaming (which period I considered to be still capable of reduction) when the rivers are full, from 1st of July to the 1st of October, and return in ten days or less.

It is established by information, but not actual experiment, that although some dry seasons are upon record when her voyage to Allahabad would have been arrested by shallows at and above Chunar (such, however, being of common occurrence, and I therefore hold it to be a fair conclusion), that the passage between Bogwangola, at the mouth of the Cossimbazar river, Jellinghee, or any point below situated on the Ganges, and Allahabad, is open to such vessels as the Hooghly at all seasons; and it must be remembered that on the Mississippi, which has been adduced as a parallel, there is a season of frost and floating ice, when the communication is suspended.

It is established that steamers may navigate the Bhagirattee for four months in the year,* and it is said that the Jellinghee will provide perhaps another month or two.†

With these premises it cannot be said that the communication is perfect with vessels constructed like the Hooghly; for although it is true that a passage exists through the Sunderbunds which is always available when the Jellinghee is closed, still some persons well acquainted with that circuitous route will concur with me in opinion that it is in every way better to avoid such passage, both for economy of time and convenience.

During the months of December to the end of June the Hooghly may ply between Bogwangola, Jellinghee, or Dacca and the Upper Provinces, and it becomes necessary to provide other means of conveyance for the treasure, troops, or passengers brought to Bogwangola or Jellinghee, to enable them to reach Calcutta, in order to perfect the communication.

This imperfection would of course be remedied by substituting vessels the draught of which could be capable of reduction to eighteen inches on emergency. It is, however, a difficult problem while engines of fifty-horse power, the least power that could be applied economically, weigh fifty tons, a weight sufficient to bring down a vessel like the Hooghly, the buoyancy of which is equal to about four tons per inch, of draught ten inches, and the stock of fuel for which, at 800 mds. (equal to $21\frac{1}{2}$ tons), will sink her between five and six inches more; considering the point mathematically, I do not conceive that there would be any impossibility to contrive a form of vessel of the same burthen, and of the self-same resistance in the water, which should draw less than the Hooghly; but there is a limit mathematically, and much more so practically, beyond which this reduction cannot proceed.

Besides that, engines of the form now used require (which is one point in the mathematical improvement which would first suggest itself) a certain depth of vessel.

It is evident that while low-pressure steam-engines are used, the problem of reducing the draft to eighteen inches will be difficult, if not impossible, to obtain for vessels carrying any burthen beyond their own fuel and stores, if even this is attained.

The remark, third and fourth paragraphs of Captain Forbes's note on the description of steamers best adapted to the navigation of the Ganges, in which he suggests the use of a single engine and long cylinder, I consider to be worthy the attention of the Government, in case the manufacturers at home can contrive an engine of the kind which shall economize both weight and fuel. I have been informed that in America it is by no means uncommon to allow the piston rods to work five and six feet above the floor of the deck in river steamers, the upper end of the cylinders being almost even with the decks, or just below. In this way a gain is obtained in the depth of the vessel, also a gain of power by an addition to the length of the stroke of the piston.

I am not sufficiently informed to speak more particularly as to the power and construction

* 1st July to 30th October.

† June and November.

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No. 25.
continued.

(10) Letter from
Capt. T. Prinsep;
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struction of the boat engines I allude to, but believe the information to be correct, as it appears to be perfectly agreeable to principle that such would be a considerable gain in power, weight, and fuel.

I cannot so readily follow the writer of the note in his preference of twin boats, as generally best adapted for the Ganges. There are some objections which strike me as almost insuperable. It is in the first place manifest that a greater weight of material must be employed in the construction of a double vessel of the kind to procure the same buoyancy, also that the resistance cannot thus be reduced below what it would be in a well constructed single vessel of the same burthen. There is also this other objection, which has been suggested by the result of the present expedition, that it will be almost impossible to so unite a double boat that she can be of the same strength as a single one to resist straining when aground in a current of five miles per hour, and her broadside presented to the stream.

A double raft of the kind I humbly consider to be only fit for still water navigation, such as that of the Jellinghee, and perhaps Ganges in the cold weather, and even there I am inclined to question the economy of her draught and burthen.

The Americans of the Mississippi have this advantage in the economical construction of their steam-vessels, that the forests from which they procure their timber are up the stream which it is wished to navigate, and then fuel, whether wood or coal, likewise found near its banks. In India the only timber reckoned sufficiently durable is imported by sea, and as yet no appearance of coal has been discovered near the banks of the Ganges. It is not then to be wondered at that, in the first instance of the introduction of steam upon the Ganges, the vessels should partake perhaps too much of the nature of sea-going vessels as to their solidity of construction, and not be similar to any model in use upon her waters; and that they should be attended with considerable expense, being constructed with an imported timber and imported engineers, instead of being built in the vicinity of her own forests and with machinery of her own manufacture.

The transport trade and passage of individuals upon the Ganges must, I may safely say, exceed that of the Mississippi a hundred-fold, and is infinitely more tedious and attended with danger as at present conducted.

Here is, therefore, a field for exertion in improvement of the navigation much beyond any that can be named in America, if it could be possible either by so developing the natural resources of the country, or awakening her industry, as to supply these two essentials to the economy of the undertaking, a native forest near which to construct the vessels, and a convenient source from which to draw her fuel.

I cannot for a moment doubt but that the best form of vessel, as also engine, will soon be contrived to ensure the success of the steam communication, from the energies and intelligence that must soon be directed to the subject, while Government remain the directors and their funds supply the stimulus.

But I fear the time is remote, and perhaps it is absolutely necessary that the way to secure success must be pointed out more clearly before private enterprize or private capital will be directed to the establishment of steam communication on the Ganges as a source of profit, after the example of the Americans.

In the present case, however, the Government expend annually immense sums on the inland transport of their treasure, stores, officers, and troops upon the Ganges, and it is not the question whether they should spend the money necessary to establish steam navigation in order to prove its practicability to other adventurers, or to profit by engrossing the whole inland carrying trade to themselves, but rather a question whether a considerable annual expenditure might not be spared, the present risk of loss to themselves alleviated, and the facilities of transport and communication of their own necessary resources increased beyond comparison.

The object is worthy the most attentive consideration and some sacrifice to attain; and
from

from what my own humble observation has led me to judge, I look forward with some confidence to the time when their endeavour will be crowned with every success, both by the discovery of coal in some district adjoining, and economical construction of steam vessels.

I have, &c.

(Signed) THOMAS PRINSEP,

Captain Engineers, and Superintendent Canals.

Calcutta,
1 November 1828.

DIARY of the EXPEDITION in the STEAMER HOOGHLY from Calcutta to Allahabad, in September 1828.

DATE	Day	Place reached.	Distance in Miles.	Time under Steam	REMARKS.
Sept 8	1	Five miles above Chogdah	47	1 15	Averaging $4\frac{1}{2}$ miles per hour. The channel broad and known, and a flood-tide in our favour for part of the day
— 9	2	Below Meertulla	41	12 37	Average $3\frac{1}{4}$ per hour Enter the Bhagirattee or Moorshedabad river at 4 h 4 m P. M.
— 10	3	Plassey ..	48	12 45	Averaging $3\frac{1}{2}$ per hour. First part of this day's route exceedingly winding, also subject to great change
— 11	4	Balanagur ..	49	13 0	Averaging $3\frac{1}{2}$ per hour Pass Berhampoor at 1 P. M. The two sharp turns above Moorshedabad present a rapid current, creating some delay
— 12	5	Two miles in Great River.	49	11 20	Averaging $4\frac{1}{2}$ per hour The current of the Bhagirattee evidently decreased, our vessel light, from consumption of its fuel The last hour and half employed upon the two miles after entering the Great River, struggling against the strength of the current
— 13	6	Rajmahal ..	28	10 12	Averaging $2\frac{1}{2}$ per hour Some loss from want of pilot. The vessel light, and speed full eight miles per hour The current therefore, making allowances, must have equalled five miles; average extreme, seven miles per hour
— 14	7	.. ..	10	3 25	Average $2\frac{1}{2}$. Started heavy with fuel; some difficulty about rudder; no pilot. The river here divided into two branches, our route lay on the shelving side of the least rapid, by report
— 15	8	Terria-gullee ..	26	9 55	Averaging $2\frac{1}{2}$. Great difficulty of steering during the first part of the day while in the Broad River. The Terria-gullee passage, although somewhat shoal, is every way advantageous.
— 16	9	Beyond Colgong	39	11 24	Average $3\frac{1}{2}$. The channel from Terria-gullee to Paturghatta not the main stream, which is here much divided. The rapidity of the current, even at the rocks passed, could not have exceeded seven miles per hour.
Carried forward ..			337	94 53	

APPENDIX,
No. 25.
continued.
(10) Letter from
Capt. T Prinsep,
1st Nov. 1828.

DATE	Day.	Place Reached	Distance in Miles.	Time under Steam.	REMARKS.
				h m	
Sept. 17	10	Brought forward Sands, midway between Tenanguira and Monghur.	337 31	94 53 10 37	Average $2\frac{3}{8}$. Pass through the Bogilpoor Creek and encounter some difficulty in its mouth, no pilot; another creek brings us to Tenanguira, where we encountered perhaps the most rapid current. The last $3\frac{1}{2}$ hours we progressed only eight miles, advancing on the shoal side of the river
— 18	11	Derriapoor Creek	43	12 10	Averaging $3\frac{1}{8}$. Above Monghur the current somewhat abated, but sands somewhat intricate, no pilot. Follow a side channel from Russoolpoor to Surajegur, also from thence to anchorage in Derriapoor Creek, which accounts for our rate being large
19	12	Gungara, eight miles from Bar	17	7 20	Average $2\frac{1}{10}$ from Derriapoor to Bar. Currents are very rapid and the river narrow. The passage hence to Bar somewhat difficult. Easterly winds. River on the rise.
20	13	Bankerpoor Creek, Patna 20th night to 22d morning	44	12 0	Averaging $3\frac{1}{10}$. A good pilot procured at Bar. The river much divided hence to Patna. The currents found rapid only below Patna before the Fulwa island; they are slack before the city and a spit of sand is forming. Easterly gales.
— 22	14	Chupra Churs ..	29 $\frac{1}{2}$	10 30	Averaging $2\frac{1}{10}$. Strong currents between Patna and Danapoor, also from Cheeran to our anchorage in the middle of a difficult passage, between sand islands.
— 23	15	Khoaspoor ..	17 $\frac{1}{2}$	6 42	Averaging $2\frac{6}{10}$. Pass the mouth of the Gogra, where the currents are rapid; then feel the right bank channel; narrow but deep. On our returning we followed the left bank, and experienced much difficulty.
— 24	16	Below Bhulleca, mouth of Surjoo River	33 $\frac{1}{2}$	12 7	Average $2\frac{1}{10}$. The banks annually suffering, but the channel favourable to navigation. The mouth of Surjoo, in Colebrooke's charts east of Bhulleca, is now west, having altered full three miles.
— 25	17	Ghazeepore ..	47	13 17	Average $3\frac{1}{10}$. Pass Buxar at noon, at Burpoor enter the Ghaspoor Creek.
— 26	18	Below Sardpoor	36	11 30	Averaging $3\frac{1}{10}$. Course entirely in the main river, one lofty bank universally of hard red clay alternating with kunkur; currents abated.
— 27	19	Benares ..	29	8 50	Averaging $3\frac{1}{10}$. Course in main stream; extreme current between five and six miles per hour; westerly wind
— 28	20	Below Kulchera	31 $\frac{1}{2}$	10 35	Averaging 3. Pass Chunar, where the channel is narrow, and breaks against a promontory with some force. Winds strong from the west
— 29	21	Phoolwareca ..	45	12 0	Averaging $3\frac{1}{10}$. Course in main stream; current much abated.
Carried forward ..			741	222 31	

APPENDIX,
No. 25.

continued.
Steam
Communication
with India,
and on the Rivers
of India

DATE.	Day.	Place Reached.	Distance in Miles.	Time under Steam	REMARKS.
				h. m.	
		Brought forward	741	222 31	
Sept. 30	22	Decha	48	13 12	Averaging $3\frac{5}{8}$. Current generally abated; the two turns of Sursa and Dum Dumba, except in the latter, we could barely stem the current in the middle of the bend; our speed about $7\frac{1}{2}$ per hour
— 31	23	Allahabad ..	10	3 17	Averaging 3. Currents slack; delay in the Lawayn reach
		TOTAL ..	799	239 0	or, general average $3\frac{3}{8}$ miles per hour.

(Signed) THOMAS PRINSEP.

ABSTRACT STATEMENT of the RETURN VOYAGE of the HOOGHLY from Allahabad to Calcutta.

PLACE REACHED.	Miles.	Hrs.	Ms.	REMARKS.
Allahabad to Chunar	115	20	33	Averaging $5\frac{1}{10}$ miles per hour. Delay at every crossing place Aground for 12 hours below Allahabad.
Chunar to Benares ..	22	3	22	Averaging $6\frac{1}{10}$ per hour
Benares to Ghazeepore	68	9	48	Averaging $6\frac{3}{10}$ per hour.
To Patna Deega ..	124	21	25	Averaging $5\frac{8}{10}$ per hour
To Monghir	97	22	15	Averaging $4\frac{1}{10}$. Much delay before Patna, Bar, Derriapoor, and from Surajegur to Monghir.
To Colgong	62	11	12	Averaging $5\frac{1}{2}$. Delay in the Secta Coon reach, also before Bogilpoor.
Rajmahal	62	7	45	Averaging 8 per hour.
To Choka Mouth ..	32	5	15	Averaging $6\frac{1}{10}$ per hour.
Through Bhagirattee and to Calcutta.	232	25	40	Averaging 9 per hour.
TOTAL	814	127	15	General average $6\frac{1}{10}$ per hour.

(Signed) THOMAS PRINSEP.

(11.)—LETTER from Captain EDWARD SMITH, Engineer, Allahabad, to H. T. PRINSEP, Esq., Secretary to Bengal Government, dated 2d November 1828.

Sir:

SINCE the receipt of your letter of the 7th August, apprising me of the dispatch of the steam vessel Hooghly to Allahabad, and requiring my possessing myself of the information necessary to determine on the practicability of extending her experimental voyage above

(11) Letter from
Capt E Smith to
H T Prinsep, Esq
2d Nov 1828

APPENDIX,
No. 25.
continued.

(11) Letter from
Capt. E. Smith,
21 Nov. 1828.

above Allahabad, my attention has been directed to an examination of the part of the Ganges in question, and to a consideration of the facts bearing upon steam navigation, in the parts of the river with which I am acquainted, as well as to the points more generally connected with the navigation of the rivers of the Upper Provinces, to which your letter adverts.

2. The result of my observations I have now the honour of submitting for the consideration of the Right Honourable the Governor-general in Council, begging permission to premise the reports, by stating that it has occurred to me that his Lordship's orders would be most readily attended to by my forwarding a report, grounded on the information that my situation at Allahabad and employment on the Jumna has allowed my acquiring, with such as the necessarily hurried researches consequent upon the call upon me has allowed of my obtaining. An immediate report will carry with it, at least, such notice of the subject as, should the perusal of it induce his Lordship to direct the duty to be continued or extended, will permit of the selection of such lines of inquiry as it may be deemed judicious to pursue. This course appears to me preferable to late and lengthened reports on designs, which cursory notice even may show to be so little promising as to render further investigation of no service.

3. Such part of the report as regards the passage of the Hooghly from below the Fort of Allahabad to above Phapamow may be shortly dismissed. From the latter end of August to the end of September, a series of measurements satisfied me that this distance had in every part a depth of channel of from twelve to twenty feet of water, with an average stream rarely amounting to four miles an hour; and on one single occasion, and at one spot only, increasing to seven; and as the survey was made after the fall of the river from its greatest annual rise, there remains no doubt of the Ganges, from the confluence of the river to above Phapamow, being easily practicable for steam navigation from the early part of July to the middle or end of September. The Hooghly, however, did not arrive till the 1st of November, at which date the final fall of the river had been proceeding for ten days, at the rate nearly of a foot a day; and there being only nine feet water in the channels, where a short time before fifteen had been found, I requested Captain Johnston to forego the attempt for ascending beyond the Fort; not that the passage was closed, but that, the river continuing to fall rapidly, I considered it injudicious, without an adequate object, to commit the vessel among shoals whence, at that late season, in case of grounding, it might have been difficult to extricate her. Had she arrived one week earlier, I should have had no hesitation in assuring Captain Johnston of a safe and easy channel.

4. An erroneous impression seems generally to prevail of the difficulty and danger of this part of the river; some idea of a permanent rapid, equally laborious to surmount in the rains as at other seasons of the year. The obstacles, however, such as they exist, are of a different kind, and in no degree affecting the navigation during the months that the river is high; but on its fall obstructions to the passage of large boats, even as early as November, are certainly experienced. Their nature I can describe, but their causes, and consequently the possibility of removing them, can, in the present dearth of data, be but surmised, or if given it can be only on analogy.

5. The difficulty of navigating the Ganges from the Fort to Phapamow extends, though in a less degree, throughout the remainder of its course upwards; and it is, I believe, from boats coming from Bengal first encountering the shoals of the single instead of the deeper channel of the united rivers at this particular spot, that it has obtained so formidable a notoriety. What really is the case may easily be supposed: the Ganges above its confluence with the Jumna is a stream of shoals and rapids, which in a measure disappear when it has received an additional supply of water from the latter river.

6. Of the difficulty of passing the Ganges in the first six miles above the Fort, the causes I fear are such as will not warrant my holding out strong expectations of their removal. The principal obstruction is felt at the junction of the rivers, where the large body of sand and earthy matter brought down by the current, particularly of the Ganges,

is deposited near the eddies and backwater, is again suspended by the streams, as the rivers, rising and falling as they are constantly doing in different levels, alternately disturb each other, and again deposited in new situations; thus forming at the entrance to the Ganges, from the united rivers, a shallow and continually shifting bar. From its confluence upwards the Ganges runs between banks more widely separated than below; here, three miles apart, through this expanse of sand, the diminished stream of the dry season winds its way with strong current but neither deep nor settled channel, the waste of sand bank presenting less resistance to the lateral cutting of the river than the bottom does to its deepening the channel. A substratum of konkur in clay probably checks the action of the water in deepening its bed; it is scarcely however discernible, the bottom of the channel having usually a layer of rolling sand.

7. The preceding account will be found not so much that of a river having its navigation impeded by rapids of defined extent, as of one generally of tedious and laborious navigation; but as sketches, however rough, will be of more avail in elucidation than further written description, I have added the marginal drawing of the river, in its several states, exhibiting its changes by references.

REFERENCES:—Supposed state of the river in November of any year, the broader stream being the navigable channel.

The change which may take place by February, the channel of November having become shoal, and a new line opened by the current.

8. In the above sketch and sections will be seen a sufficient explanation of the obstacles to the employment of paddle and barrel-boats, arising from the shallowness and changing of the channel, which would often leave dry the paddle-boats moored two or three months previously in deep water, rendering at least an annual shifting of the moorings necessary. The aid of the paddle-boats may, from this shoalness of water, be of reduced utility as to obtaining the requisite depth of water. Boats are obliged to keep so near the steeper bank as to be enabled to employ their goonds or tow-ropes, the power applied to which in the crew, is sufficient to carry the boat over the stream, except on particular occasions and in certain parts, in which again increased rapidity of current is accompanied by diminished depth of water and variableness of channel: the objections to the paddle-boats becoming the stronger at the spots in which, otherwise, their employment might be beneficial.

9. A question will naturally arise of how far it is practicable to confine the dry-season channel to the same line, year after year, which effected, the chief objection to the employment of paddle-boats would be obviated. Much encouragement to attempt works for the accomplishment of this end is not to be found in the nature of the river; that is where no fixed point exists to regulate the line of channel of two or three hundred yards wide, and when it runs in an expanse of two or three miles in breadth of sand bank, and to prevent its changing its passage through any part of which no natural obstacle is to be discovered. Still something may be attempted, but only on the observations of several seasons, grounded on accurate plans, proving that the stream has an inclination to certain lines, to retain its current and line of navigation in one of which must be the highest effort aimed at; the power of such a river in opening its channel may perhaps be guided, but cannot be controlled or opposed with the most distant hope of success.

10. My observations regarding a canal cannot but be brief: were the plain of the Doab less elevated than it is a lateral cut would be very desirable, but with rivers rising at the periodical rains upwards of forty feet, taking every advantage of ravines, a depth of cutting of fifty or sixty feet on a length of about three miles is unavoidable; a scale of work involving an expenditure of from ten to twelve lacs of rupees, a sum which the trade now on the river could not repay. The total absence of superficial waters on the Lower Doab precludes the adoption of the more economical form of lock canal.

11. Much faith has, I believe, been placed in the feasibility of a canal, from the belief in the existence of an unfinished native work of the kind, and the circumstance of the irrigation canals of the natives, in the Upper Doab having been traced with a judg-

ment

APPENDIX,
No. 25.
continued

(11) Letter from
Capt E Smith,
2d Nov 1828

ment creating confidence in the success of their other attempts in similar works: that adverted to, however, I have long since examined, and found it unfortunately with every mark of an entrenchment cutting off the point and protecting the open city and suburb of Allahabad from predatory attacks, but with none whatever of a canal.

12. If the work be ever resolved on, the sole method of preventing the rise of the expense above a very large amount will be that of making the canal perfect itself by its own waters, by taking advantage of the difference of level between the Ganges and Jumna, and by introducing water at periods when the great fall through the canal, aided by simple dredging machinery, will of itself effect the excavation. Even this process, from the works necessary to guard the head of the canal on the Ganges, must be expensive and slow, and conducted with much caution.

13. Before determining on the execution of works at any particular point on the river, it may be no more than prudent to ascertain its general character for navigation: if of equal difficulty throughout, the improvement of six miles would be of little service, when hundreds remain in the original state; while the removal of a bar to navigation, or a difficulty at a particular point, checking navigation throughout the course, would be of the highest service. To obtain the requisite knowledge on this head would cost little trouble. Registers of boats established at the Fort Point, at Allahabad, at Phapamow, and at a station some distance up the river, Betoua Ghant perhaps, near Futtehpore, by giving the relative time of passage over the intervening space, will afford the surest information of the comparative facility of navigation, with the addition of accurate returns of the trade on the river, the value of which must materially influence a decision on the nature and expense of any works contemplated for improving the navigation.

14. Though in the present varying channels near Phapamow paddle-boats are not applicable with advantage, there are passages in the Ganges, below Allahabad in particular, where the casual observations made in a voyage up the river, confirmed however by accounts commonly received as correct, incline me to think the use of such aids to boats would be productive of much benefit. Between Allahabad and Mirzapore are projecting portions of the main bank, round which, with deep water, the stream rushes with great velocity; the necessity of tracking often brings boats within the influence of the strongest rush of water, with its attendant inconveniences, of the employment of large numbers of men, the breaking of tow-ropes, delay and at times loss of property; whereas the paddle-boat would supply the requisite power of ascending along the less impetuous portion of the stream. Whether Government would derive compensation for the outlay from the levy of a consideration for the aid of paddle-boats must be doubtful, particularly where a long train is required; but the experiment at points such as I have sketched requiring the establishment of one or two only, cannot be a costly one. Few sources of any but vague information regarding the American rivers are, I regret, open to my search, as a perfect acquaintance with the fruits of European enterprise and experience displayed on so ample a field would tend greatly to the establishment of a sound foundation for essays on the improvement of the rivers of Bengal, though their character is, I imagine, too tropical to be susceptible of the same improvement from art as those of North America.

15. Nothing which the preceding sheets contain has a very intimate connexion with the general question of steam navigation; but should the voyage of the Hooghly terminate in favour of the future employment of Government steam vessels, the extension of the voyage to Cawnpore, during at least the rainy season, may well be allowed to enter into the estimate of advantages. With but the slender acquaintance of a few days with the powers of steam vessels, I have, from my professional avocations on the Jumna, necessarily a considerable one with the common course of navigation of that stream and of the Ganges, and do not consider that Allahabad is to be considered the limit of steam navigation on either of the rivers, when the system shall be rendered more complete by the adoption of the ready and not expensive means of combining safety with increased expedition which even now suggest themselves.

16. This

16. This report, I hope, will be found to comprise the desired notice of the points mentioned in the letter of my instructions, in so far at least as may be required for fixing on the subjects of my further report, should such be deemed desirable.

I have, &c.

Allahabad, 2d Nov. 1828.

(Signed) E. SMITH, Captain Engineers.

APPENDIX,
No. 25.

continued.

Steam
Communication
with India,
and on the Rivers
of India

(12.)—LETTER from Captain W. WARDEN, of the East-India Company's Marine, to the Marine Board at Bengal, dated 23d May, 1829.

Gentlemen :

ON the 13th instant I had the satisfaction of reporting to you my safe return to Calcutta with the Honourable Company's steam vessel Hooghly, from her second experimental voyage; I have now the honour of submitting to you a circumstantial report of the transactions of the voyage, with such remarks as I hope will prove useful in facilitating steam navigation at this season of the year.

Agreeably to the instructions of the Board, bearing date the 13th of March 1829, I left Calcutta with the Honourable Company's steam vessel Hooghly on the 17th March, fully equipped for this voyage, having on board 500 maunds of coal in our boxes, and about twenty-two tons weight of provisions, wood, fresh water, passengers, baggage, and freight, a list of which I have annexed hereto. With these articles on board the Hooghly drew four feet three inches forward, and three feet six inches aft. In this trim I did not find her more unmanageable than when at the lightest draught at which I was able to get her during the voyage, which was four feet one inch forward and three feet three inches aft, and but two revolutions less of her paddle-wheels.

On the 9th March I reached Bissuntpore, the first coal depôt, which I would recommend being discontinued, as its distance from Calcutta is too short, and occasions unnecessary delay; also as it obliges steam vessels to leave the lower Sunderbund route and pursue a middle course by way of Munick Khal, Goodlad's Creek, and the Chandcolly, through which the Hooghly came with some advantage, as the tides were in her favour; yet I would by no means recommend this route being in general adopted, as Manick Khal and Goodlad's Creek are only flood-passages, and may occasion a detention in waiting for tides; independent of the difficulty there is in getting through Goodlad's Creek, which is so narrow that it is quite impossible for a steam vessel of the Hooghly's size to steam through it without touching the banks on both sides of the creek, which the Hooghly did several times. The Chandcolly, though there is deep water through it, is so very narrow and circuitous that it is not a safe passage for a steam vessel; in this creek, I regret to state we lost our gig; she was torn from the stern davits by the projecting branches of a large tree, in sounding one of the narrow sharp turnings.

For these reasons I would recommend in future the lower Sunderbund route being adopted; though the distance is greater, I am of opinion it may be run in nearly the same space of time as the Hooghly took in reaching Koolna by the way of Goodlad's Creek. On the 20th March I reached Koolna, our second coal depôt, which is extremely well adapted for the first depôt from Calcutta, as a steam vessel leaving Calcutta with 500 maunds of coal on board, would, I consider, have 100 maunds remaining on board on her arrival at Koolna, even though she came by the lower route. It is also convenient for getting the coals off, as a steam vessel can haul close alongside the bank for that purpose; I also found, from having been steaming so long in salt water, it became necessary to clean the boilers, &c.; I was therefore obliged to wait here, even though it had not been a depôt, but, as it is, all purposes are answered by this one stoppage. On the 21st of March I again proceeded on my voyage. In passing through the Modomutty, a remarkably broad and deep river, offering in itself no impediment to the navigation of vessels of any description, I found it ~~in~~ ^{at} four different places, from Momutpore downwards, strongly

staked

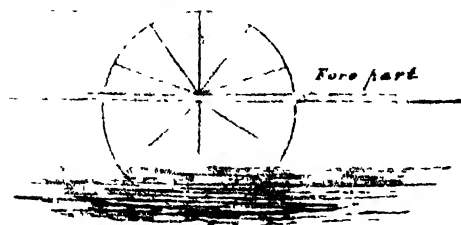
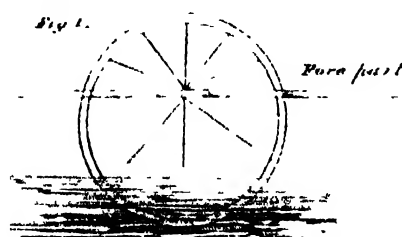
(12.) Letter from
Capt W Warden
to Marine Board,
23d May 1829.

staked with fishing stakes completely across the river, leaving only a small boat passage of about twenty feet wide, in passing through which the Hooghly's paddle-wheels were greatly endangered. This is not the only objection; these stakes are of so strong a description and so thickly placed that they impede the free course of the current, and cause sands to accumulate on them, in passing through one line by which I found only nine feet water; and below the lower line of stakes an immense sand has accumulated, such as I did not find in other parts of this river, and could only account for by the water's course being impeded. I would therefore, for the improvement of this navigation, strongly recommend their entire removal.

On the 23d of March I reached Comercolly, our third depôt, which, though rather a long stage from Rajmahal, is perhaps the best that could have been selected, from its conveniences in getting the coal off. Our averaged rate of steaming from Calcutta to this place was five miles and three-quarters per hour. I was only detained at Comercolly three hours and forty minutes, and left again the same day and entered the Ganges at Koosthea.

The Sunderbunds are particularly adapted to steam navigation, in fact they offer no impediment; it is scarcely even necessary to slow or stop the engines for a minute, and after a little practice may be navigated by the charts alone, even without a pilot; but this I would not at present recommend, as it requires some little practice to become acquainted with its intricacies. I would here beg leave to offer a few remarks, which may prove useful in this navigation: Steam vessels should by no means enter any of the small creeks towards night, as it is unsafe steaming through them after dark, and equally dangerous anchoring in them, from the liability there is of large wood boats and others falling on board; these vessels are of a very large description and draw as much or more water than the Hooghly does, and are so deeply laden that they are scarcely manageable, but drift down as the tides carry them. They go at all times when the tides answer, and any of these falling on board a steam vessel in a spring-tide, which I found to run from three to four miles an hour, would cause serious injury; I would therefore strongly recommend one of the large creeks or rivers always being selected for anchoring in at night, and then not in the centre of the channel.

In my progress through the Sunderbunds I found the paddle-wheels frequently endangered by the projection of large stumps and roots of trees from the banks, and once from a large wood boat falling on board of us. To prevent as much as possible accidents to the wheels, I would beg to be permitted to suggest that an iron guard rail should be fitted for their protection, which I should imagine might be accomplished at a very trifling expense,



or little detriment to the vessel's speed, by securing strong carved bats of iron to the beams on which the paddle-shaft rests, and to the vessel's side below the wheels, as shown in Fig 2; but on this subject I shall not presume to say more, but leave it to the decision of professional men. It will not only be useful in the navigation of the Sunderbunds, but I should think in the Hooghly and Ganges likewise, and would prevent the possibility of boats, when coming alongside, getting under the wheels, which there is always great danger of, even when at anchor, in a strong tides-way.

I would likewise beg to suggest that steam vessels in this navigation should be provided with iron quarter davits to hoist their light boats to, had the Hooghly's boat been hanging at a quarter davits instead of a stern one, the accident that occurred to her would not have happened.

I hope

I hope my estimated distances may be found correct between Koolna and Monghyr, as between these places I had not complete charts; I was consequently obliged to get my distances from different authorities.

Soon after I entered the Ganges I fell in with the strong westerly winds that usually prevail at this season of the year, which impeded my progress very considerably, as it generally blew nearly a gale of wind the greatest part of the day; but steaming head to wind, I do not think the poop impeded the vessel's progress in a much greater degree than a common awning would have done.

On my arrival at Monghyr I overtook all our coal boats, I was consequently obliged to fill our boxes, which brought the Hooghly down to 4. 1. forward and 3. 8. aft. After leaving Monghyr, in passing from Dulollpore as far as Rajowlee Ghaut, on the opposite side of the river to Bar, the river has taken a new course, and there are many very large stumps of trees remaining in the centre of the channels, some of them but a few inches under water, which are extremely dangerous, not only to steam vessels but to all descriptions of boats passing this way.

On the 31st of March, in passing between sand banks a little above Surajegur, was the only opportunity I had on my voyage of proving the efficacy of the new rudder. The current was irregular, but did not in rapidity exceed five knots, which, though considerably less than its rate in the rains, yet even in this I found it insufficient to command the vessel, and we grounded in consequence, I can therefore with confidence report that it will not be sufficient to command the vessel in strong currents in the rains. I had likewise an opportunity of proving its effect when coming suddenly in contact with a sand; in this respect the invention is quite successful.

A little above Buxar, at full power, we struck upon a knoll of sand in a few inches less water than our own draught. The rudder, when it came in contact with the sand, rose of itself and when clear of the sand fell again without sustaining any injury; had our rudder in this instance been a fixture, or only to have been got up by tackles, I have no doubt it would have been torn from the stern frame.

The only improvement that occurs to my mind as likely to remedy the defect in the steering of the Hooghly is by lengthening the sternpost, and thereby carrying the rudder further beyond the dead water in her run; a rudder on each quarter might answer, but I should imagine it would be very expensive fitting them, and they would be very much exposed to injury in touching the bank, or in making stern-boards, which is frequently necessary.

On the 2d April I reached Dinapore, where I met considerable detention from having to communicate with the civil authorities which reside at Patna, which is about seven miles off; I would therefore beg leave to suggest that on future occasions the necessary references should be made to some of the authorities resident at Dinapore.

After leaving Dinapore I met with such extreme difficulty from the ignorance of our pilot, that I found it impossible to proceed at full power, therefore, to prevent the unnecessary expenditure of fuel, I directed one boiler only to be used, and applied to Mr. Pringle at Chapra, from whom, on the following day, I got the most clever pilot I had hitherto met with, and though the preceding day I had only been able to make eight miles, yet the following, with the assistance of this man, I steamed fifty-four miles, which circumstance I mention to prove that the principal difficulty in this navigation is the want of good pilots.

On the 6th April I reached Ghazeepore and took in a further supply of coal, and on the 7th started again. I consider the navigation between this and Benares the most, and in fact the only dangerous part of the Ganges, from the shoals of Konka rocks that lie off Kytee, where the soundings are very irregular and the channels very narrow. A steam vessel ought to pass this part of the river with the greatest caution, for if she struck at full power on any of these shoals the consequence would be of a very serious nature, and in all probability the loss of the vessel.

APPENDIX,
No. 25.

continued

Steam
Communication
with India,
and on the Rivers
of India

APPENDIX,
No. 25.
continued

(12) Letter from
Capt. W. Warden
to Marine Board,
23d May 1829

On the 8th I reached Benares, and after taking in 100 maunds of coal, I left it again on the 9th, drawing only 4. 1. forward, and 3. 3. aft. The same day I passed Chunar, and arrived off Kutchwa in the evening at 5. 30. p. m., where I found my further progress impeded by a shoal extending completely across the river. I accordingly anchored the Hooghly in a safe anchorage, and proceeded with the boats to sound this shoal, and after a thorough investigation I found there was not more than 2. 6. water across it in any part. I remained here examining this place until eleven a. m. on the following day, when having satisfied myself that there was not sufficient water for the Hooghly, and that the river was fordable in the above-mentioned depth from Chunka over to Burraince, I gave up the attempt.

On my arrival at Kutchwa I found three native boats aground on this shoal, two out of which had to unload their cargoes on the sand ere they could get over it; and during the time I was sounding it a great many native boats passed both up and down, every one of which came by this place, and those that exceeded in draught two feet water grounded. I am induced to mention this circumstance to show that this was the only channel left open at this season of the year. At this place the current was one mile per hour, at Dinapore about two, and off Surajegur five knots only for a short distance, and at the lower parts of the Ganges two and a-half miles per hour.

I can with confidence report that, unless great alterations take place, which from the instability I have found in this river I consider very likely, Chunar is the highest station at which a steam vessel can be got up to at this season of the year.

I have annexed hereto a table, showing the dates of my arrival and departure at the several stations, likewise the quantity of coal taken at each and what left.

I found all our coal depôts well chosen and conveniently situated on the Ganges. After passing Saulpore on the Ganges, and as far as Benares, our averaged rate of steaming was three and a-half miles per hour, and our expenditure of coal from Calcutta to Benares is 1,950 maunds, 250 maunds of wood.

On the 27th April I again left Benares on my return to Calcutta, when I adopted Captain Johnston's plan of using a stern anchor, for which purpose I found our kedge anchor answer. I likewise found one boiler quite sufficient, and even with this was seldom able to go full power for any length of time together.

On my way down it generally blew quite a gale of wind during the middle of the day, which, though generally a fair wind, impeded our progress as much as though it had been a head wind, and frequently rendered the vessel almost unmanageable. On these occasions I found the poop to affect her steerage in some degree, rendering it frequently necessary to keep the jib upon her to counteract its effect: notwithstanding this objection, I consider the advantages of the poop greater in the accommodation gained by it than the objections to it.

The navigation of the Ganges at this season of the year must always be attended with some difficulty and detention to steam-vessels from the extreme shoalness of the river, as in several parts thereof, even in the best channels, there was not more than four and five feet water; the current at this season offers but little or no impediment, as I did not find it exceed two miles and a-half per hour below Dinapore, except at Surajegur, and there only for a short distance; between the sands the current was five knots, and above Dinapore only one mile per hour.

Though this navigation presents many difficulties, I do not by any means consider it dangerous at this season, except between Ghazceppore and Benares, in passing between which places the greatest caution will be necessary.

In fact, the strictest attention to the management of the vessel, the engineer, and the appearance of the water ahead, will at all times be necessary.

I have previously mentioned the difficulties and detention I met with from the ignorance of our pilots, which is the chief obstacle in this river; and it can never be navigated

gated to advantage by steam vessels without an efficient establishment of this class of men.

During my detention at Benares I was enabled to make some temporary arrangements for the establishment of pilots at the most intricate parts of the river, which, though but imperfectly carried into effect, was of great advantage to me on my return voyage. I would therefore beg leave to submit the same, which may prove useful in permanently establishing pilots for this river, which for a time, until its channels are perfectly known, will be necessary for the Government to support: from Calcutta to Koolna two pilots; from Koolna to Saulpore, on the Ganges, two more. I should not suppose that it would be necessary to allow boats for these pilots, as the difficulties are but few, and the channels, I should imagine, do not alter much.

- 2 pilots and boats from Saulpore to Bagwangollan
- 1 pilot and boat from Bagwangollan to Mohengunge.
- 2 pilots from Mohengunge to Rajmahal.
- 2 ditto from Rajmahal to Corah Golah.
- 2 ditto from Corah Golah to Boglepore.
- 2 ditto from Boglepore to Monghyr.
- 2 ditto from Monghyr to Bar or Rajewallee Ghaut.
- 2 ditto from Bar to Dinapore.
- 2 ditto from Dinapore to Ravelgunge.
- 2 ditto from Ravelgunge to Bhaulea.
- 2 ditto from Bhaulea to Ghazeepore.
- 2 ditto from Ghazeepore to Kyte
- 2 ditto from Kyte to Benares.
- 2 ditto from Benares to Chunar.
- 2 ditto from Chunar to Mirzapore
- 1 pilot from Mirzapore to Poolwarreea.
- 1 ditto from Poolwarreea to Sursa.
- 1 ditto from Sursa to Allahabad.

The above pilot stations are not all of equal distances, but chosen according to the difficulties and intricacies of the respective places.

I would also beg leave to suggest that, independent of these native pilots, there should be at least three European officers to superintend them, who should be allowed fast pulling covered boats, to be constantly pulling about, and see that the above pilots are on the alert, without which I am afraid the object of this establishment would be but very imperfectly accomplished.

I would likewise beg leave to recommend that the description of men known by the name of Jaulpulwarreeahs should be engaged as pilots for the river, as they have a better knowledge of it than any other class of men I have met with, and from the inquiries I made I am induced to believe they would be satisfied with the pay of Lascars.

On my return voyage our average rate of steaming on the Ganges, with one boiler, was very nearly five miles per hour, and through the Sunderbunds, with both boilers, six miles and three-quarters; and the expenditure of coal from Benares to Calcutta 900 maunds. I regret to state that, notwithstanding I took every possible precaution of slowing, and often entirely stopping the engines, and sending our boats sounding whenever we suddenly shoaled our water, or when the channel was not clearly understood, we grounded frequently three or four times a day, from the extreme shoalness of the river, in many parts whereof there was not more than four or five feet water in its deepest channels. The river, when I left Benares, was at its very lowest ebb, and by the time I reached Rajmahal it had begun to rise in a trifling degree; however, the principal cause of our grounding was the extreme ignorance of the men who came as pilots. We have seldom run aground at full power, and generally came off without any great detention, except on one occasion: On the 27th of April, the day on which I left

APPENDIX,
No. 25.
continued

(12) Letter from
Capt W. Warden
to Marine Board
23d May 1829

I left Benares, we grounded, going quite slow, on the spit of a sand, a little above Thanapore, though our boat with a pilot in her was going ahead. We remained aground six hours, though by no means in a dangerous situation, as there was the same depth of water all round the vessel, her head very nearly on with the current, which was only one mile per hour.

On the 4th of May, a few miles above the Janquire rock, we grounded on a sand, but did not remain long, and in swinging off bent the pintle of the rudder, but not so much as to render it in any manner unserviceable. I remarked that whenever we grounded, we usually hung more in midships than in any other part, though I could not perceive the vessel to have fallen any thing. Some of the butt-ends seemed to have worked a little, but so triflingly, that I think it may have been occasioned by the extreme heat and dryness of the atmosphere; for while at Benares we found it shrank all the casing and split the pannels of the cabin doors. The engineers also stated, that when going at full power the engines worked, though I could not perceive it, more than heretofore.

I would beg to suggest that on a future voyage, at this season of the year, the poop should have a double roof, the lower one of which might be of the lightest description, even half an inch I should think would be sufficient for the lower roof, with a space of about four or six inches between the two decks. The thermometer under the poop deck was generally 104 during the greatest part of the day, and the cabin, from the poop having but one thin deck, so excessively hot it was scarcely possible to remain in it.

I would likewise recommend the bulk-head of the cabin being brought one beam further forward and divided by a shifting partition into two cabins.

I am now employed in filling in, on Captain Prinsep's charts, the various sands as I found them in the dry season, which shall be forwarded as early as possible.

I am, &c.

(Signed) W. WARDEN,
H. C. Marine.

Calcutta, 23d May 1829.

A LIST PACKAGES taken up on Freight

For Dinapore, 5 cases; Public Department
Ghazeepore, 2 casts of stamps; 2 cases of wine.
Benares, 4 cases; Public Department.
Allahabad, 2 cases, sent on from Bitorohie

A LIST of PACKAGES brought down

From Benares: one case for J. Caulder, Esq, Calcutta. one wax cloth parcel, consigned to Alexander and Co.; one box, Captain Collic

From Ghazeepore: three wax cloth parcels, for Bhaulea; two boxes, Captain Beadle, two boxes, Mr. Pattie; one case, Mr. Patten.

From Monghyr; one parcel, Mr. Bushby.

From Bogilpore: one case, Mr. Angiar

NAMES of PLACES	DATES	Names of Places arrived at	DATES.	Number of Hours Steaming	Quantity of Coal taken in at each Station	Quantity of Coal left.	Distance between each Station
GOING UP							
Calcutta ..	March 17	Bissuntpore ..	March 19	Hrs. 27 Min. 15	Mds. 200	Mds. 200	Miles 190
Bissuntpore ..	19	Koolna ..	20	15 0	150	250	75
Koolna ..	21	Comercolly ..	23	22 20	250	150	106
Comercolly ..	23	Rajmahal ..	26	30 50	250	150	153
Rajmahal ..	27	Monghyr ..	30	39 15	420	200 deposited from the Ghazee- pore supply.	123
Monghyr ..	31	Dinapore ..	April 2	30 20	250 of wood	380	90
Dinapore ..	April 3	Ghazee-pore ..	6	40 0	150 coal	250	123
Ghazee-pore ..	7	Benares ..	8	18 25	100	300	66
Benares ..	9	Betowlee ..	9	10 55	—	—	37
RETURN VOYAGE							
Betowlee ..	April 10	Benares ..	April 11	9 0	—	—	—
Benares ..	27	Ghazee-pore ..	28	12 15	150	150	—
Ghazee-pore ..	29	Dinapore ..	May 1	20 15	200	200	—
Dinapore ..	May 1	Monghyr ..	3	24 0	200	—	—
Monghyr ..	3	Rajmahal ..	5	22 45	150	—	—
Rajmahal ..	8	Comercolly ..	8	25 0	100	50	—
Comercolly ..	9	Koolna ..	10	16 0	100	150	—
Koolna ..	10	Calcutta ..	12	28 0	—	—	—

Fort William, Marine Board Office,
9th June 1829

(True Copy)

(Signed) C. B. GREEN, Secretary

(13)—LETTER from Captain JAMES H. JOHNSON to G. B. GREENLAW, Esq. Secretary to the Marine Board at Bengal, dated 30th April 1829.

(13) Letter to
Capt J H Johnson
to Secretary to
Bengal
Marine Board
30th April 1829

Sir:

I AM desired to report to the Marine Board, for the information of Government, the result of some further experiments on towing vessels with the Berhampooter, which were made by order of the Right Honourable the Governor-general on the 28th and 29th instant.

The experiment on the 28th was directed principally to ascertain the correctness of the results apparent on the trial of the 20th, which were on this occasion confirmed in every way; and I have only to remark that the speed was decreased half a mile per hour by taking the Soonamooky alongside instead of towing her astern, this was a consequence to be expected.

On the 29th the Berhampooter took three vessels in tow, in the following order: The Soonamooky went astern a budgerow of sixteen oars and a pinnace of twelve: the vessels were brought as close to each other as their bowsprits would allow, but were still too much apart; and it is very desirable that boats intended to be towed should be deprived of every superfluity of bow, so as to admit of their coming in close contact with the leading vessel's stern.

At

APPENDIX,
No. 25.
continued.

(13) Letter from
Capt. J. H. Johnston
to Secretary to
Bengal
Maume Board,
30th April 1829

At 6. 25. the Berhampooter set on her steam with her head up the river (the last of the ebb still running); midway between the Governor-general's and Chandpaul's Ghaut the vessels turn round, and the evolution was performed in little more space than if the Berhampooter had been alone. At 6. 32. with slack water, the four vessels passed the Governor-general's Ghaut; the engines worked to twenty seven strokes, and the speed by log was $4\frac{1}{4}$. At 7. 11. when the flood-tide had made, and with a fresh southerly wind, the vessels came abreast Sir Charles Metcalfe's house; and at 8. 10. they were abreast the creek at Rage Gunge, when the pinnacle was east. The engines had been working to thirty strokes, and the speed by log had been $5\frac{1}{4}$ on an average, from which deducting one-seventh for the wash of the paddles, five miles will remain for the true rate nearly; and admitting the true speed of the Berhampooter without a tow to be $6\frac{1}{4}$ miles, a diminution of $1\frac{1}{4}$ mile, or one-fifth of the speed, will appear to have been occasioned by towing these three vessels.

With the Soonamooky in tow on the preceding day, the distance between Sir Charles Metcalfe's and Rage Gunge had been performed in forty-three minutes: this day, with three vessels in tow, it occupied an excess of sixteen minutes, or a little less than two-fifths of the whole time with the Soonamooky in tow. The speed was on the former occasion calculated to be diminished about one-twelfth; with the three vessels it appears by log to have been diminished a little more than one-fifth, and on the time forty-three minutes. This difference of speed should have made a difference of $11\frac{1}{2}$ minutes only, whereas sixteen minutes are exhibited, and this must be accounted for by stronger tides, or the fallacy in measuring the rate by log; but supposing each vessel to have diminished the speed to the same extent as the Soonamooky, then would the three vessels have caused a difference of three-twelfths, or one-fourth of the whole speed, and the true velocity would have been $4\frac{1}{4}$, which is perhaps a near approximation to the truth.

Some time was occupied at Rage Gunge in ascertaining the rate of the tide, which at this particular place appeared to have great strength, and was found to be running $2\frac{1}{2}$ miles per hour.

At 8. 59. the three vessels proceed to the jar-makers. The wind had increased very much, and the engines fell to twenty-eight and twenty-nine strokes. The speed by log increased from one-eighth to one-fourth of a mile, and the vessels reached the jar-makers at 10. 4. or in an hour and five minutes from Rage Gunge, exceeding by twenty-seven minutes, or one-third, the time occupied by the Berhampooter in running the same distance on the preceding day, when without a tow and with much less opposing wind. The three vessels then returned to the Governor-general's Ghaut, with wind and tide, in one hour and twenty-two minutes.

The experiment has had a satisfactory result in demonstrating the facility with which a long line of vessels may be towed where the navigation is not very tortuous; but where wind and tide are to be taken into the account, it is impossible to arrive at a very accurate estimate of the speed of the vessels. But the main object of the experiments may, I think, be attained by making a trial on the spring tides, when their velocity is quite equal to the current in the great river. The experiment may then be made by towing one, two, and three vessels between given points; and to assist in ascertaining as nearly as possible the speed, I propose anchoring three or more tow-boats at intermediate stations, provided with log and glass, to the rate of the tide every ten minutes during the time the experiment is making.

Budgerows will be preferable to pinnaces for towing, both on account of the form of their bottoms, and of their not being so much cumbered with masts, &c. The accommodations they afford are, I believe, little inferior to those of the pinnaces.

Calcutta, 30th April 1829.

I have, &c.
(Signed) JAMES H. JOHNSTON.

(14.)—LETTER from Mr. A. P. WALL to Captain J. H. JOHNSTON, commanding Honourable Company's Steam Vessels, dated April 12th, 1830.

Sir:

AGREEABLY to your request of the 16th instant, on which date I had the honour to report my safe arrival at Calcutta with the Honourable Company's steam vessel Hooghly, from her third voyage to the Upper Provinces, I beg leave to submit my remarks on the occasion for your information and communication to the Marine Board. It is proper, however, that I should premise that my attention during the trip was (as doubtless you must be aware) chiefly devoted to the safe conducting of the vessel, and therefore it is not possible for me to give so circumstantial an account of the performance, &c. as was made by yourself and Mr. Warden of the first and second trips.

2. I left Calcutta on the 9th of January at 6 A. M., having the boxes filled with coal, (containing about 500 maunds), sixty-three native servants belonging to the Governor-general, and about forty tons of baggage, provisions, water, &c.; the vessel was consequently deeper than on any previous voyage, being four feet seven inches forward, and four feet one inch aft. In this trim (as must be expected) I found her more unmanageable than when at her usual draught, and made two revolutions and a-half less of the paddle-wheels. In true currents she steered tolerably well.

3. On the 11th, at 9. 20 A. M. I arrived at Bussuntpore, where we landed our empty water casks, and received about sixty maunds of coal to prevent unnecessary delay at Kulna, and at 10. 50 A. M. I proceed on (the tide being favourable at the time for making a passage through Goodlad's Creek), but was again forced to anchor and remain at the entrance until half flood before there was water sufficient to admit the vessel to pass through, thereby causing a detention for tide of three hours and a-half. I would here beg to suggest that this passage be not attempted with a falling tide, as only one cubit water remains in it, and a vessel grounding in such case would be placed in a dangerous situation; and further, I always found it necessary to get ropes out from the head and stern, with the crew on shore to guide the vessel through, the passage being narrow, circuitous, and shoally; but notwithstanding this precautionary measure, we took the bank on every occasion of passing, several times with bows and quarters; and what adds more to the difficulty, there are generally a great number of country boats in this place, which enter from both sides of the passage as the tide begins to rise. I did not experience difficulty in passing through Chaud Kallee on our way up, being at the time high water, and the passage clear of boats. I however deemed it prudent to lower the stern boat, and towed her through. This I would also suggest being done on all future occasions, as a measure necessary even with quarter davits; as on our return through this place, we came up with a number of large country boats, and in endeavouring to pass them got against the bank; the only damage, however, sustained was by a tree breaking one of the venetians of the poop cabin. The greatest care and attention is requisite in going through all these narrow passages against the tide, from the danger of the boats that pass them at all hours, day and night; independent of which, much danger is to be apprehended from the stumps and branches of trees breaking or seriously injuring the paddle-wheels. All these obstacles I am informed, however, may be avoided by taking the lower route; the distance is certainly greater from Calcutta to Kulna by eighty to 100 miles, but it may perhaps be worthy of consideration whether this would not be preferable to risking the safety of the vessel, and I apprehend the passage would scarcely cause a delay of more than a day and a-half in the trip.

4. On the 12th at 1 P. M. I arrived at Kulna, where I hauled to the jetty, and received about 300 maunds of coal, and at 2. 30 proceeded on for Comercolly. In passing through the Modomutty, or Barasshy river, the fishermen had commenced to stake it across; there was however sufficient room for the vessel to pass, but instead of crossing from the regular channel we had to pass from the opposite bank of the river in nine feet water. On our return I found one of the rows of stakes moved from their original position, being

APPENDIX,
No. 25.

continued

(14) Letter from
Mr A. P. Wall to
Capt.
J H Johnston;
12th April 1830

APPENDIX,
No. 25.
continued

(14) Letter from
Mr A. P. Wall to
Capt
J. H. Johnston.
12th April 1830.

pulled up and the ends fallen down with the stream; this, together with a number of other bamboos, stuck in different parts of the channel, that it was with the greatest difficulty I could find my way through, there being a light fog at the time. I would beg to call your particular attention to this, for the purpose of having a sufficient opening left for the vessel to pass on the deep side of the river, without being in danger of running on those stakes, any one of which is sufficiently large to go through the vessel's bottom, or break the paddle-wheels.

5. On the 14th at 1. 15 p. m. arrived at Comercolly, where we remained that day to take in coal, and clear the flues, boilers, &c. In the Gorri river, from Comercolly downwards, the current was about three miles and a-half per hour, and from its very circuitous route was little better than an eddy; it affected the vessel's steering very much. There are a number of shoals also in this river, which are of hard clay. The banks are steep, and of some substance, so that a vessel falling against them would endanger the paddle-wheels.

6. On the 15th at 7. 45 a. m. started from Comercolly, and entered the Ganges at Koostea, the current running about two miles per hour. From Jenadar Thana to the head of the Rose Marra river (two miles, or thereabouts, above the Jellinghee) the current was strong, averaging about four miles per hour, the banks occasionally falling in, and the water generally not exceeding six to nine feet in depth. At this place we found the rudder at times quite insufficient to command the vessel. This was invariably the case, even when not drawing more than four feet two inches forward and three feet four inches aft, if the currents were strong, and the vessel within a foot or so of her draught. I am led to conclude it is in consequence of the body of water being insufficient for the weight of the vessel, as I always observed the head dipping from six to eight inches in approaching a shoal.

7. On our way up the Ganges to Dinapore we had several calm days, which in some measure impeded our progress, as the channels are much better traced with a slight ripple on the water than with a glassy smoothness; moderate head-wind for this purpose is preferable to calms. The currents differed very inconsiderably, and though they did not generally exceed one mile and a-half per hour, I found them frequently as rapid as four miles. I particularly noticed this from Chunar to Invalid Tanna (between Derriahpore and Bar); the current at this place has taken nearly the course that the Hooghly run in 1828, and left that we were forced to go last year, by the way of Dulolpore, and is very rapid and shoal.

8. On the 25th left Dinapre, encountered a number of difficulties off Chupra, and in consequence applied to the magistrate of that station for a pilot to proceed up with us; two were sent: one proved the man who had acquitted himself with so much satisfaction on the preceding trip, and it is proper that I should here state that his conduct was equally satisfactory on the present occasion.

9. On the 26th at 4 p. m. run on shore near Bhorumpore, and was necessitated to lighten the vessel, having previously endeavoured to heave off without effect with the bower anchors; for that purpose procured a large-sized pinnace, "Bellona," belonging to Woodin and Co., on her return to Calcutta empty, and had come-to for the night abreast of us. After taking out all the Governor-general's baggage and servants, and letting the water out of the boilers, I succeed on the following morning in heaving her off. Trimmed the vessel to four feet one inch forward, and three feet five inches aft, and took the pinnace in tow, keeping her about twenty-five fathoms astern, to prevent her running on board of us in case of taking the ground suddenly. On getting into a shoal and intricate passage off Hurdee, cast her off, and ordered the Serang to track through. Near Gay Ghaut I again took them in tow, and although I found the navigation from that place upwards as bad as any I had met with, I did not again let them go until in sight of Ghazeepore, and this was only for a few minutes, while crossing a ridge of sand that extended across the river, with less water on it in many parts than our actual draught.

10. We

10. We reached Ghazeeport on the 29th January at 2. 30 P. M., and left on our return for Monghyr on the 2d of February. On the return voyage to that place I adopted your plan of using the stern anchor, from which I derived great benefit, and could approach a shoal with the greatest confidence and ride with the vessel's head in a proper direction for starting. It was also of great service in casting the vessel in narrow places, but from Monghyr down I could not make use of a stern anchor, in consequence of having the pinnace in tow. On three occasions that we took the ground I made the pinnace slip the tow-ropes and sheer off, and being of light draught, only two feet nine inches returning, she always went clear of every thing; except on one occasion, when the bill of her anchor tore off a part of the Hooghly's quarter badge. I deemed this the most prudent and safe method of towing; had I lashed her bowsprit to the Hooghly's stern, I think when the former took the ground in swinging broadside to the stream, the pinnace must have fallen alongside, with her stern to our head, and would in some measure injure both vessels, and the difficulty of extricating them from such a situation would, I conceive, be very much increased. Of the two evils, therefore, I considered it better that the towed vessel should risk touching, than to fall alongside the tugging vessel. Perhaps, also, it may be proper for the vessel to be towed being taken alongside, when it can be done without inconvenience to passengers, as in this case the stern anchor might be used to advantage, and the engines backed when occasion required, neither of which can be done with a vessel in tow astern, by which you are deprived of two of the greatest essentials in navigating the Ganges. In October 1829, on returning from Dewangunge in the Bhagirattee river, after making the attempt to get to Berhampore with his Excellency the Commander-in-chief, I took his boat, the "Lion Pinnace," alongside, in consequence of the river being very low and narrow, for the convenience of working the stern anchor. His Lordship complained, however, of the noise of the paddle-wheels; I therefore abstained from making further trial of the experiment on this occasion. It would appear to me that the vessel to be tugged should have her masts up, fore-and-aft sails bent, and be furnished with luggies, track-lines, &c., and a boat, and the people on board to be at all times prepared for letting go at a moment's notice, as on the several occasions of our casting the pinnace off they made sail or tracked, as was requisite to keep her in the channel.

11. From Monghyr down used both boilers when occasion would permit; this I effected by ordering the second to be made ready about an hour previous to my reaching a certain point, from whence I knew of a run without danger from ten to twenty miles. On approaching shoal water the fires of one boiler were discontinued. In this way the trip was expedited, and the expenditure of fuel considerably saved.

12. It would appear to me to be scarcely possible to limit the distance which a vessel of the Hooghly's draught shall proceed in the dry season up the Ganges, as she is as liable to meet a barrier of sand in the lower as the upper part of the river. I infer this from having found a boat two miles below Seeregully, a sand extending completely across the river, and the deepest water on it being only five feet in the width of the river to this place, near a mile, and the current not exceeding one mile and a-quarter per hour.

13. I met with considerable detention from the ignorance of our pilots in some stations, and beg to refer you to the annexed list for their names, capabilities, &c.

14. Much inconvenience was also experienced, both on the passage up and down, in consequence of not having a light fast-pulling boat for the purpose of sounding, which is so frequently necessary on voyages of this description, as I could not work the engines sufficiently slow to have the vessel under proper command, and admit of the jolly-boat keeping ahead. To this I attribute the vessel's having grounded more frequently than otherwise would have been the case.

15. The coal depôts are properly selected for the present season of the year. It may, however, be worthy of consideration whether, for making the passage during the rain- and strength of the currents, a small supply of coal should not be lodged intermediately

APPENDIX,
No. 25.

continued.

(14) Letter from
Mr A. P. Wall to
Capt
J. H. Johnston,
12th April 1830.

between the present depôts of Rajmahal and Monghir (say Bogilpore) and between Monghyr and Dinapore (Bar), and also between Dinapore and Ghazepore. A little delay will necessarily take place to receive the coals at those places, but I think it would more than compensate in the run; on the whole, judging from our voyage in September 1828, the coal boxes will barely contain sufficient to last from one of the present coal depôts to the other, with a vessel in tow, more particularly as the quality of the fuel now at the depôts on the Ganges is not the most superior, it being, at many stations nearly one-third small coal-dust, with particles of dirt; it was with some difficulty we were able to keep the steam up with it.

16. On my passage up and down I noted several boats that had been lost in consequence of getting upon sunken trees or boats, dangers equally as bad as rocks; there is nothing to warn you of these dangers, and you run on unconscious until upon them. On one occasion I found I was running direct for a sunken tree about a mile below Duboulee, and should most probably not have escaped, had I not been warned of my danger by people on shore, whose boat had only a day or two previous to my arrival struck upon it and sunk alongside the bank before they could get her secured, or any portion of the cargo out. I saw another boat laying fixed upon a tree, with the branch through her, about one mile above the entrance of the Surgoo river. These dangers might possibly in a great measure be obviated, I think, were peremptory orders given by the magistrates to remove the fallen trees from the banks, and to cut down such as the next rains must lodge in the bed of the river. A bamboo with a small flag should be fixed to those that cannot be removed from the bed of the river, which would no doubt prevent many losses.

17. It is perhaps proper that I should state, since the additional pantries, cooking places, &c have been built upon the sponcheons, the vessel falls over very much when the helm is put hard up or down; and on one occasion, in passing through a creek in the Sunderbuns, she heeled so much, that the water came into the scuttles on both sides as she rolled: never having noted an occurrence of the kind previously, I attribute it to the additional top-weight on the sponcheons.

18. The vessel went on shore frequently during the trip, in two instances struck the ground severely, and was with great difficulty hove off the sands on several occasions; nevertheless I am not aware that she is injured in any way. The only thing I have heard from the engineers is that two of the cylinders holding down bolts have got a little slack.

19. I hope I may be permitted, in conclusion, to bring to notice the universal good conduct, zeal, and attention of my officer and the engineers throughout the trip.

Calcutta,
12th April 1830.

I have, &c
(Signed) A. P. WALL.

NAMES of PLACES	Date of Leaving.	Names of Coal Depôts arrived at.	Date of Arrival	Number of Hours Steaming under weigh	Number of Hours Fire burning	QUANTITY of COAL RECEIVED.
PASSAGE UP.						
	1830:			Hrs. Mins.	Hrs. Mins.	
Calcutta ..	Jan. 9	Bussuntapore ..	Jan. 11	20 30	33 10	500 mds. from Calcutta
Bussuntapore ..	— 11	Kulna ..	— 12	12 50	17 0	60
Kulna ..	— 12	Comercolly ..	— 14	22 35	25 45	300
Comercolly ..	— 15	Surdah ..	— 16	16 0	19 40	180 Fy
Surdah ..	— 16	Rajmahal ..	— 18	22 0	26 0	100
Rajmahal ..	— 18	Monghyr ..	— 21	28 0	35 0	200
Monghyr ..	— 22	Dinapore ..	— 24	27 15	35 30	250
						200
						1,790 Total.
Dinapore ..	— 25	Ghazeeapore ..	— 29	36 0	56 45	300 received on arrival ex- pended, returned.
PASSAGE DOWN						
Ghazeeapore ..	Feb. 2	Dinapore ..	Feb. 4	24 10	32 40	50
Dinapore ..	— 5	Monghyr ..	— 6	19 15	23 15	100
Monghyr ..	Mar. 7	Rajmahal ..	Mar. 8	19 10	24 50	130
Rajmahal ..	— 9	Comercolly ..	— 11	26 30	35 15	130
Comercolly ..	— 11	Kulna ..	— 12	16 15	18 5	300
Kulna ..	— 13	Bussuntapore ..	— 14	13 30	15 0	80
Bussuntapore ..	— 14	Calcutta ..	— 15	27 0	29 30	..
						used both boilers 5½ ditto 1½ Performance with the Betowla pinnace in tow, about 200 mds. remain- ing on hand on arrival at Calcutta

A LIST of Pilots employed in the Honourable Company's Steam Vessel HOOGLY,
during the Third Voyage to the Upper Provinces.

NAMES.	Distance of Pilotege engaged for	GENERAL REMARKS AS TO CAPACITY.
Burkattah ..	Calcutta to Kulna in Jessore.	totally ignorant of the Lower Sunderbuns, and quite lost until the afternoon of the second day, when being told his position, a perfect master at Kulna.
Nazer Mahomet and Mahomet Sulser- dee.	Kulna to Comer- colly	the former had been that route the preceding year, the latter not for seven years; both incompetent as pilots
Goluck and Akoor, mangies ..	Comercolly to Jel- linghee river.	behaved very well, but not of the class of men proper to become pilots.
Pushon Chowdry ..	Jellinghee river to Surdar.	behaved in like manner with the above two; not of the class to become efficient as a pilot.

(continued :)

APPENDIX,
No. 25.
continued(11) Letter from
Mr. A. P. Wall to
Capt.
J. H. Johnston,
12th April 1830.

NAMES.	Distance of Pilots engaged for	GENERAL REMARKS AS TO CAPACITY.
Comul	Surdah to Rajmahal	assistant to the Ghaut mangie; totally useless, and a hinderance more than otherwise, landed in consequence at Bogwangolah with certificate to that effect
Kadoo	Bogwangolah to Rajmahal	a smart active man, engaged by me at that place; taken on to Peerpointy, in consequence of his relief at Rajmahal being useless.
Roopchand	Rajmahal to Peerpointy	of no assistance; received a certificate to that effect when discharged
Terbhown and Mamou.	Peerpointy to Manayar Chuk.	jaul pulwarree mangies or native pilots; smart men and gave satisfaction
.. ..	Manayar Chuk to Monghyr.	jaul pulwar mangie, a native pilot and a clever man
Ramjee	Monghyr to Medine Chokee.	jaul pulwar mangie; gave every satisfaction
Rutton and Dyme	Medine Chokee, off Akburpoor.	jaul pulwar mangie, gave every satisfaction, carried on to Bar in consequence of not meeting any relief pilots.
Saoghur pilot, accompanied by Seelah	Bar to Peeparpointee	both useless, the first in particular was discharged with a certificate to that effect on the second experimental trip, and on the present landed at Patna as useless, having led us into more difficulties than we should otherwise have met with
Surdah	Dinapore to Chupra	behaved very well, having only arrived one day previous from Revalgunge
Beechoo and Beechand	Chupra to Ghazee-pore.	jaul pulwarree mangies; both excellent pilots, and as such took them on to Ghazee-pore, and returning to Dinapore, second time employed, and behaved well giving every satisfaction
Kullen	Peeparpointee to Hurdee	an indifferent kind of pilot in practice
Jodah and Lall Muntur	Hurdee, about to miles only	passable only as jaul pulwarials or native pilots
Mowit	Gay Ghaut to Bulleah	jaul pulwarree mangie, a very good pilot; continued on to Buxar, not meeting his relief
Rutton	Buxar to Ghazee-pore.	jaul pulwarree mangie; a native pilot, but not of the first class
Bussund and Putto	Howuteepore to Ghazee-pore	jaul pulwarree mangie, a clever active man, and gave satisfaction

RETURN VOYAGE

Bussund and Putto	Ghazee-pore to Beer-pore.	behaved well on the return trip
Rutton	Beer-pore to Buxar	behaved as on the passage up
Mowit	uxar to Hurdee	acquitted himself equally well as on the trip up
Jodah and Lall Muntur	Hurdee to Bherumpore	similar conduct to that mentioned on the voyage up.
Kullen	to Dewar River.	as on the trip
Beechoo, Beerchand	Dewar river to Dinapore	none who had been that way for the past six months. though they behaved well
Lutetman and Babee	Dinapore to Bar	very good active men; Lulah, who went up afterwards, joined in a state of intoxication.
—	Bar to Soorajgurrah	none

(continued.)

APPENDIX,
No. 25.

continued

Steam
Communication
with India,
and on the Rivers
of India.

NAMES.	Distance of Pilotage engaged for	GENERAL REMARKS AS TO CAPACITY.
RETURN VOYAGE—continued.		
Rutton	Soorajgurruh to Monghyr.	acted as on the passage.
Buxoo	Monghyr to Jug-neera Rocks	a very good pilot.
—	to Peerpointee	acquitted themselves with satisfaction
—	to Rajurahal ..	a smart active fellow, taken on to Surdah, not having confidence in Pushan's abilities
—	to Surdah ..	as on the passage up, only middling.
—	to Jellinghee ..	a servant of the Ghaut mangie, a man useless and incompetent, not being in the habit of going in boats.
Okoor	Comercolly ..	behaved as on the passage up.
—	to Kulna ..	ditto .. ditto .. ditto .. of little use.
—	Kulna to Calcutta	a very excellent pilot for the Upper Sunderbuns; not competent to take a vessel through the Lower

The jaul pulwarree mangies are the best calculated for directing a vessel through the intricacies of the inland navigation, and acting as pilots to the large native boats; they have a practical knowledge, and from the general appearance of the water, they form an opinion of the depth you are likely to find.

Fort William, Marine Board-office,
11th May 1830.

(15)—EXTRACT LETTER from the Governor-general in Council at *Bengal* to the Court of Directors, in the General Department, dated 12th October 1830.

Sirs:

1. On our proceedings of the 22d of June last, the Governor-general recorded a Minute, bearing date the day preceding, proposing, for the reasons set forth therein at length, that Captain Johnston, formerly commander of the steamer *Enterprise*, and who has uniformly shown himself an excellent officer and well acquainted with the practical and scientific questions connected with steam navigation, as well as with the construction of steamers both for sea and rivers, should proceed to England in aid of the purposes in the view of Government connected with this subject, as explained at length in our letter dated the 18th of May last.

2. We beg to refer your Honourable Court to the Minute in question, for the complete exposition of the motives which induced the Governor-general to propose this step. We trust his Lordship's reasoning will satisfy your Honourable Court as to the impossibility of putting either yourselves, or the professional persons who must be the agents for executing anything that might be determined, in full possession of all that has been done, and of the results of the different experiments made by mere written communication, howsoever minute and voluminous.

3. The objects in our view in deputing Captain Johnston are thus explained in his Lordship's Minute, a copy of which was furnished to that officer for his instruction:

That he proceed to England as agent to this Government for superintending the preparation

(15) Extract
Letter from Bengal
Government to
Court of Directors
12th Oct 1830

APPENDIX,
No. 25.
continued.

(1) Extract
Letter from Bengal
Government to
Court of Directors,
12th Oct 1830

paration of steam-engines, with plans of vessels to be used as tugs, as well as for the conveyance of cargo, adapted to river navigation in this country.

That he be desired to collect and possess himself of full information as to the experiments made and points ascertained in connexion with the subject, and be supplied with copies of the material papers.

That in England he be placed entirely at the disposal of the Honourable the Court of Directors, as a person capable of giving the best information as to the ends in the view of the Government in respect to the river steam navigation, and as to the means of accomplishing them, and the obstacles to be expected.

That the Honourable Court be solicited to afford assistance to Captain Johnston in completing his plans, in concert with scientific engineers and machinists, and that on such being done to their satisfaction, Captain Johnston be permitted to return to this country with the draughts of the vessels, in order that they may be constructed under his superintendence, and that orders be given for preparing the engines and forwarding them with all practicable expedition. The number to be supplied may be left to the discretion of the Court, but it ought not, his Lordship said, in his opinion, to be less than what might be requisite to fit up three tugs.

4. The Marine Board and officers employed upon river steam navigation in this country have been directed to keep Captain Johnston informed of every thing bearing on the subject that may come to light here, and Captain Johnston has in like manner been desired to communicate any new discoveries, and to report the progress of his deputation, with any information calculated to assist the measures in hand in India, directed to the same end.

(16) Extract
Minute of
Governor General,
21st June 1830.

(16)—EXTRACT MINUTE of the Governor-general, Lord W. BENTINCK, dated
21st June 1830.*

It will be evident to any person who examines with attention the proceedings of this Government for the past two years, connected with river steam navigation, that the branch of the subject in respect to which our information is most defective, and yet which meets us in every turn, and has hitherto presented most obstructions to the success of our endeavours to introduce this grand invention upon the rivers of India, is the method of adapting the steam power with most advantage. We possess but few engines, and these are mostly of the same or nearly the same kind; they are all in full employ in vessels or in other works, and we can make no experiments with them without losing their service in the interval. When a point has been established in respect to the navigation, such, for instance, as the necessity of reducing the draught of the vessels used in the upper navigation to a maximum of two feet, we have only the weight of our present engines to assume in calculating the necessary displacement and consequent dimensions of the vessel to be built. It is now more than a year since the Marine Board were directed to procure from Captain Forbes, our superintendent of steam engines, and the officer best acquainted with these machines in the country, a descriptive indent of several to be written for from England for purposes of river navigation. Such an indent has never been furnished, and there is no blame to Captain Forbes that it has not; for, imperfectly acquainted as he must be with the progress of home improvement in this particular branch, with his information necessarily six months in arrear, he cannot ascertain that the engines he might describe would be sure to be the best that could be put in hand. An experiment is making to ascertain whether one engine may not suffice. Upon the result of this much will of course depend; but it may only suggest further experiments,

* Consultations, 24d June.

experiments, and will still probably leave much more to be done before we shall be able to come to any satisfactory determination as to the best means of attaining the end we have in view.

Fortunately the voyages that have been made, and the information accumulated in them, have given us a distinct perception of the end to be aimed at. We know that we require manageable vessels of considerable power of engine, and consequent velocity, but not drawing more than two feet water for the maximum. It is my wish to combine with our efforts to attain this object, by means to be employed here, a reference to the ingenuity and science of Europe, as applied daily to the improvement of steam engines. I do not think it would be sufficient to state our wants in correspondence and reports, to be submitted through the Court of Directors to scientific machinists and engineers in England; but being well aware that much will be gained even by this, I have desired that the result of the experiments made, and an abstract of all that has been done hitherto in connexion with this subject, shall be collected and put together in a shape to be printed and circulated, in order that the consideration of others may be invited to a matter to which I attach so much importance, and that opinions may be gathered upon it in all quarters.

For our particular purpose I think it will be necessary, in addition to taking those steps to draw attention to the subject, that some one intimately acquainted with its details should be induced to proceed to England, and put himself in communication with the scientific men that may be selected or indicated by the Court of Directors as most worthy of their confidence, in order that, if any points should be omitted or imperfectly explained in the statements made from hence, the requisite information may be supplied on the spot, and by keeping up a correspondence with those employed on the scheme in India, at the same time that he hold constant intercourse with the engineers at home, this officer may be the means of securing the most perfect unanimity of plan and of execution in whatever may be attempted.

For these reasons I am induced to propose that Captain Johnston be directed to proceed to England, to superintend and assist, under the instructions of course of the Court of Directors, the preparation of steam engines, and the plans of vessels to carry them, adapted to river navigation in this country.

B O M B A Y .

(17.)—EXTRACT LETTER from the Governor in Council at *Bombay* to the Court of Directors (Public Department), dated 31st May 1823.

2. We have for some time past been engaged in inquiries respecting the practicability of opening a communication with England through Egypt by means of steam vessels, and observing from the public prints that the subject has also been agitated in England, we consider it will be acceptable to your Honourable Court to be placed in possession of such information as we have obtained on the subject; and to be assured, in case your Honourable Court should be disposed to sanction the arrangement, that the difficulties on this side of the Egyptian Isthmus are not greater than on the other.

The distance from London to Bombay through Egypt is not great, but the winds in the different seas that must be crossed are never all fair at any one time; so that if the passage be good in the Mediterranean or the Indian Ocean, it is bad in the Red Sea, or *vice versa*. For this reason, although the whole passage from London to Bombay was once made in two months, yet it generally takes three months to go from Bombay even to Suez. The great advantage of a steam boat is, that it is independent of the wind. It

(17.) Letter from
Bombay
Government to
Court of Directors,
31st May 1823

APPENDIX,
No. 25.
continued.

(17) Letter from
Bombay
Government to
Court of Directors;
31st May 1823

would therefore go through all the seas between this and England, and at all seasons, nearly at the same rate.

4. The average rate on the British seas appears by the report made to Parliament on the subject of steam vessels to be about eleven miles an hour: one boat is mentioned as going ten miles an hour against a stiff easterly wind. Taking eight miles an hour for the average rate (which is very moderate considering that the whole voyage lies through seas little subject to bad weather), and supposing the distance from Portsmouth to the mouth of the Nile (by the Straits of Gibraltar) to be 3,000 miles, and from Suez to Bombay as much more (both of which assumptions are considerably above the truth), the time occupied by the sea voyage would be thirty-one days, the Isthmus might easily be crossed in three days, and the whole would take only thirty-four days, not exceeding by more than a fortnight the ordinary period till lately required for the post to pass between Bombay and Calcutta.

5. We have here alluded to the circuitous communication by the Straits of Gibraltar, because in time of war, when quick communication is most required, we might not be able to send the packets through France; the probability, however, of our being at once shut out from all the routes across the continent, and all the ports on the European side of the Mediterranean, is extremely small; and by any of them the time would be much short of what we have estimated.

6. Egypt has seldom or never been so disturbed as to stop our packets; but if it were so, the steam boats might for the time go to some port in Syria on the one side, and to Bussora on the other, so that the packet would still pass with great rapidity, though not so quick as through Egypt.

7. It appears to us, on our present view of the question, that two boats on each side of the Isthmus would be quite sufficient to allow of a packet being dispatched regularly every month.

8. We have no means of estimating the expense of such an establishment, but we conceive that it would be the means of so greatly facilitating the communication between India and the mother country, and so entirely change the relation between the two, that your Honourable Court would derive full indemnification for any expense which you might incur in the speedy transmission of your instructions; at the same time it would become the channel of all the private correspondence between England and the other Presidencies in India, and a charge for postage equivalent to the great advantages obtained, would, it may be presumed, be cheerfully borne by the Indian community at large.

9. Private speculators might, we conceive, be also found, when the practicability of the arrangements is once fully established, to take steam vessels on themselves, and they would no doubt find a considerable recompense also from the conveyance of passengers by this route, which would now be very generally adopted if the public could depend on a regular conveyance to Egypt.

(18) Letter from
Bombay
Government to
Court of Directors,
18th April 1830

(18.)—LETTER from the *Bombay Government*, in the Marine Department, to the Court of Directors, dated 18th April 1830.

Honourable Sirs :

1. MR. J. W. TAYLOR, who lately came out from England overland *via* Egypt, having submitted to us certain proposals for the immediate establishment of an extensive line of communication between England and India by means of steam vessels periodically leaving both countries, we have informed that gentleman that we are of opinion that your Honourable Court are alone competent to pass a decision on his proposals, and that they would therefore be submitted for your consideration, accompanied by all the information we could obtain

obtain calculated to enable you to judge of the expediency or otherwise of entertaining his propositions.

2. In submitting, therefore, these proposals to the notice of your Honourable Court, we beg to accompany them with an estimate of the expense of building and sailing, including the repairs of a steam vessel of the size and description of the *Hugh Lindsay*, continually employed in voyages to and from Suez, amounting to rupees one lac forty-six thousand and sixty-four annually (1,46,064), together with a statement of the probable receipts from postage on letters transmitted quarterly by this mode of conveyance, and the amount actually realized on the letters and packets sent by the Honourable Company's cruiser *Thetis* and steamer *Hugh Lindsay*.

3. In regard to these statements we would observe that since steam navigation in this country is quite in its infancy, no data at present exist for arriving at accurate conclusions, either respecting the expense or profit of steam vessels, if their maintenance is persevered in by Government; we are however inclined to think that, whilst on the one hand the expense is overrated, the Postmaster-general's estimate of the postage revenue likely to arise is considerably below what will ultimately accrue to Government when this mode of communication is (as we entertain no doubt will ultimately prove the case) generally resorted to by the community from all parts of India.

4. We beg to add our opinion that no doubt can exist of the practicability as well as utility of extending steam navigation to Egypt from Bombay, and that we should consider it a most fortunate circumstance if our attempts to promote this desirable object shall, by indicating such to be the case, induce men of enterprize and capital to embark in an undertaking of the nature proposed by Mr. Taylor.

5. Your Honourable Court must possess greater facilities than we do of judging of all that respects that part of the question which relates to the Mediterranean and the English Channel. Difficulties may arise as to depôts of coals, but none of a nature, we should hope, that may not be overcome. The enterprize of individuals in such a navigation will undoubtedly effect much good, and their zeal, knowledge, and activity, stimulated by the hope of gain, would accomplish more, and at a cheaper rate than can in reason be expected from public establishments.

6. The plan proposed by Mr. Taylor evidently requires great and combined means to give it even a prospect of success; we are of opinion that his calculations are far too sanguine, and that his plan is on too large a scale. These are, however, objections to his scheme that may easily be obviated. In the first instance we must give our opinion, as relates to India, that the undertaking may and should be conducted on a more limited scale, and subsequently extended according to circumstances. On the degree in which Mr. Taylor possesses the means of carrying his plans into effect, or can command them, we have no opportunity of judging, but this we deem of little importance, as your Honourable Court can easily determine this point.

7. In transmitting these proposals for your consideration, we cannot avoid expressing our decided opinion that almost incalculable advantages may be anticipated from a well-established steam communication by the Red Sea, and our earnest hope that, unless other proposals of individuals have been entertained and their plans put in progress, and in case Mr. Taylor's schemes are viewed as either inexpedient or impracticable, that every support will be afforded by your Honourable Court to maintain this desirable communication by vessels in the public service.

We have, &c.

(Signed)

JOHN MALCOLM.
JOHN ROMER.

(19.)—LETTER from Mr. J. W. TAYLOR to Sir JOHN MALCOLM, Governor of Bombay, dated December 1st 1829.

Honourable Sir :

(19.) Letter from
Mr J W Taylor to
Sir J Malcolm,
1st Dec 1829

THE very great anxiety which your Excellency's Government has shown to bring about the desirable measure of establishing a regular communication between Great Britain and India, by means of steam vessels periodically leaving both countries, encourages me, in the hope that the proposals which I have the honour to submit in the present letter, and which I have just arrived from England, *via* Suez, expressly to carry into effect, will be deemed worthy of the support and countenance of your Excellency's Government.

I have for upwards of four years been employed in maturing such a communication for the East Indies, by means of steam vessels, as shall answer all the demands of the Anglo-Indian community, not only for its intercourse with Great Britain, but also with all parts of India itself, and which, in point of regularity or speed of progress, or cheapness of charge, shall leave little to be desired. I trust I may with truth assert, that every point in this undertaking has been attentively considered, and its contingencies estimated and provided for. In order, however, that nothing might be wanting to the general efficiency of the establishment, or to the comfort, while *in transitu*, of those whom we hope will become our passengers, I have myself passed to India in the very route intended to be followed, and have thus in person superintended the general arrangements, a more particular specification of which will be found in the accompanying paper, marked No. 1. Anticipating, as I venture to do, an expression of satisfaction on your Excellency's part as to the terms and conditions, I beg leave respectively to inform your Excellency, that the requisite number of steam vessels being already built and equipped, a commencement may be made on the proposed line of communication within three months from the period when the assent of your Excellency's Government to my propositions may be made known to me.

If then I should be honoured with such assent, it is my intention, within the period already specified to be the means of introducing into British India such a number of first-rate steam vessels, unexceptionable in point of size and equipment, as will enable me to propose myself to become a general carrier to all the Indian Governments both for England and in India, and will admit of those Governments maintaining a constant and regular communication with Great Britain, and all principal parts of British India, on the 1st and 15th of every month. I profess myself ready to take charge of all the mails, both of the Governments and of individuals, without restricting either to size or quantity of letters, which I will engage to deliver in a specified time, taking up from and delivering at the different Presidency post-offices all such letters as I may be entrusted with, binding myself to be ready to start with such mails from all the three Presidencies, and also from London, twice in each month. I will further enter into engagements with Government, by which I will bind myself to furnish all officers of His Majesty's and the Honourable Company's civil, naval, and military services, with passages to and fro, between England and India, at the Honourable Company's regulation prices, and I will generally bring them to their journey's end in about fifty days, after a transit of at present unsurpassed pleasure and facility. The establishment will also yield the means of communicating twice a month will all the principal parts of India, under that degree of speed and precision which steam vessels are so well known to ensure, the regularity of which kind of intercourse it will be our constant endeavour to preserve unbroken. Thus adding most materially to the consolidation of the at present divided portions of the Indian empire.

The advantages thus proposed to the Governments, in the more speedy intercourse with England, and in the carriage of the letters to and from that country, and to the members of the different services of His Majesty and the Honourable Company in the readier and more economical medium of visiting their native England, may be secured to all on the following conditions :

The projectors of this new mode of communicating with Great Britain have no intention

tion of asking your Excellency's Government to make them any preliminary advance of cash to ensure an immediate realization of the important changes they thus propose to effect; but with reference to the very heavy outlay which their establishment will lay them under, and more particularly adverting to that very serious addition to their dead capital which a provision of that quantity of coal necessary to ensure the intended frequency and regularity of their voyages will involve, they feel themselves compelled, before actually embarking in their undertaking further than the build and equipment of their different vessels, to solicit of your Excellency's Government the favour of a clear and distinct guarantee that, for a specified period, say for two years, they shall be in receipt of a fixed and definite income annually; and they hope to be able to show that your Excellency may acquiesce in their request without exposing Government to a chance of being out of pocket. Should this be granted, the proprietors will agree at the end of two years to continue all the proposed advantages of their establishment as to letters and passengers, without expecting any further remuneration than the Acts of Parliament and the regulations of the Honourable Company entitle them to demand. Without such guarantee, however, they could not venture to undertake an enterprise of so much magnitude, so closely connected as it is with the extensive purchase of so unsaleable an article as sea-coal. With this proviso, the following are the conditions, which are respectfully submitted for the consideration of your Excellency:

Your Excellency is doubtless aware, that the Supreme Government and the communities of Bengal and Madras have already agreed to give to a Mr. Waghorn, of the Bengal pilot service, a modified rate of payment according to a certain scale, made contingent on the period of delivery (of which scale I beg leave to enclose a copy) for all letters which he may bring out on a steam-vessel which he went home to build and equip. The actual prices thus agreed to be given to Mr. Waghorn will satisfy us; but since some certain amount of annual income for a specified period is, under the very heavy outlay to which the perfection of our establishment will expose us, absolutely necessary to its existence, we trust Government will agree to give us, for two years certain, payment at the same rate per letter, for such an annual number of letters as the records of the different Presidency post-offices shew to have passed annually both from England to India and from India to England in a given year, such payment to be made by *pro rata* monthly instalments, commencing as soon as the steam-vessels commence their deliveries of letters, to be calculated and charged to the different Governments, according to the proportion of numbers which the post-office deliveries and receipts during the year selected may show each Presidency to have received and forwarded for that year, and enduring for two years, when all steam postage is to cease, but the letters then to be carried free of that charge, and all other advantages herein contemplated to the services to continue. In short, for two years' fixed and certain annual remuneration, to be paid to us by monthly instalments, commencing when we commence our deliveries of letters, we will set the establishment into full and immediate operation, and we will continue its many and unquestionable advantages after the two years have expired, without then requiring any extra remuneration for the same beyond what the present Acts of Parliament and the Regulations of the Honourable Company admit of.

In making this sole requisition as the price of their ability and readiness to set this important establishment into full and immediate operation, the proprietors hope that your Excellency will be of opinion that their offer is not likely to be exceeded in point of liberality or eligibility by other individuals. It would have been most acceptable to the undersigned and his associates had it been possible to introduce their plan without making any stipulation at all with the different Indian governments or communities; but the enormous outlay necessary to their undertaking, and chiefly the heavy increase to the dead stock caused by the provision at first essential to a vigorous and uninterrupted prosecution of their intended voyages, rendered it absolutely necessary that, for the first two years of their operations, they should possess a clear and distinct guarantee from Government as to the extent of one portion of their annual returns before embarking on any

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No. 25.
continued

(19.) Letter from
Mr. J. W. Taylor to
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any proceedings. No item of those returns is better adapted to answer the purposes of all parties than letters, because the highly-diminished period in which they will under the new system be delivered, will render their arrival most welcome to the receivers, though accompanied by a postage charge; while their annual numbers in most years reaching the same average will enable the carriers to calculate the amount of revenue they stipulate for, and thus proceed in their important operations with greater confidence of giving satisfaction to those from whose support they will derive their means of existence. By reference to the agreement with Mr. Waghorn, already referred to, it will be seen that the Supreme Government and that of Madras, as well as that of the British communities there resident, have agreed to pay the same quantum of remuneration per letter for every letter brought by him as we are willing to work for; but when your Excellency does us the favour to reflect how far more extensive and superior are the advantages we hold out to British India than any which the plan of that gentleman contemplates, we do hope that no doubt will remain in the mind of your Excellency as to the propriety of adopting our proposals. To particularize: Mr. Waghorn's is a single ship, built expressly to exclude passengers, and intended to navigate solely between London and Calcutta round the Cape of Good Hope, by which circumstance he does not anticipate an earlier period of delivery for his letters than seventy-five days, and he even anticipates the possibility of his requiring one hundred; thus denying all advantage to the Indian community in their capacity of passengers, and rendering those tendered to them in their character of correspondents of very doubtful and questionable importance. Our establishment, on the contrary, will benefit the Indian governments and community in both these characters most decidedly. As correspondents we will generally carry their letters in fifty days; nay, we will engage, barring only accidents not repairable at sea, which, in the way we shall be stored and fitted, are not very likely to happen, to deliver them in sixty-five days; while the regularity with which we shall go and come will benefit commerce as essentially as the later and more regularly received official news must prove advantageous to Government. As passengers, we offer the Indian public a highly-diminished expenditure, both of time and money: we enable them to calculate both to a nicety, thus conferring a privilege of a most invaluable nature, and by the frequency as well as certainty of period of our departures, we do what will perhaps more than all render both Governments and governed in India favourable and friendly to our establishment, we place at the command of all persons whose invalid constitutions may cause the question of going quickly and certainly to sea to be one of life or death, an almost unerring medium of flying from that fate which, from a compulsory residence on shore, owing to the hitherto acknowledged difficulty of getting at some seasons of the year to sea in India, has unhappily too prematurely overtaken many a valuable member of the Indian societies. The proprietors know not a benefit of higher worth promised by their establishment than this; and while they feel that any lengthy detail of the advantages which their steam vessels will ensure to the state and community of India must be superfluous with a Government which can so well understand and appreciate the public wants, they feel confident that Government will not suffer to pass unnoticed or unrewarded the full and complete manner in which the intended steam establishment will carry into effect what it has always been the benevolent endeavour of Government to accomplish, *viz.* the furnishing junior officers of the services with cheaply charged passages to and fro between India and England. These two points, *viz.* the more assured renovation of health to invalids, and the cheaper rate of passage to junior officers, would assuredly most strongly incline your Excellency to give every support to our proposals, even were the certainty of a direct advantage to Government less palpable than in the present case it fortunately is. The communities of Bengal and Madras have expressed themselves ready to pay Mr. Waghorn his own price for every letter he brings, without reservation, though he only contemplates as his maximum benefit bringing those presidencies thirty days nearer home than they now are, and he may possibly effect no change of any importance at all. It cannot be doubted then that in our case, when we shall annihilate at once, and "*pour toujours*," half

half the time now dividing India from England, and where we offer other weighty benefits, only properly appreciable by those long resident in India, they will cheerfully pay the stipulated price for all their letters brought out in two years to have them free of steam postage always afterwards. Government, by charging these letters to the public at the agreed price, will run no chance of being out of pocket in those letters addressed to the public; though, as the letters dispatched and received annually by Government are not included in the average of the year selected, they thus have the certainty of knowing that all their own letters will always be carried free. While then the public health, as in case of invalids, or the public convenience, as in case of passengers, will thus receive a very material benefit, commerce and correspondence will acquire a decided stimulus, the Indian empire will assume a consolidation quite unexampled, and the equally important interests of religion, of botany, and general science, will experience a full proportionate share of benefit, because by a very slight arrangement already in part provided for, rare and valuable plants, or animals of either country, may be interchanged and advantageously acclimatized. To sum up all, India will never again labour under the inconvenience or the stigma being, as she has frequently been, six months without direct intelligence from or intercourse with England.

If the arguments which I have thus ventured to make use of, at I fear too great length, should induce your Excellency to confer on us the honour of your patronage and support to the proposed undertaking, I feel quite confident that our establishment will give general satisfaction; we shall at all times endeavour to prevent all cause for complaint, and I have no doubt but that our proceedings will be characterized by regularity. Respectfully venturing to anticipate the existence of a desire on your Excellency's part to see our proposals take effect, I would as respectfully suggest that I am quite ready to return within a few days to England, in which case I see nothing to prevent the first steam vessel leaving for India in August next. It is clearly of importance, with reference to the passenger season, both here and in England, that no time should be lost. I pledge myself to your Excellency to be in England in sixty days from that of my being honoured with your affirmative reply, and that the first steam vessel shall be at sea in thirty days after I arrive. I shall feel truly proud in being further permitted to signalize your Excellency's splendid government of the Bombay Presidency by the introduction of so important, so interesting, so national a change, as will attend the operations of an establishment of regularly working steam vessels, such as I have herein ventured most respectfully to solicit the patronage and countenance of your Excellency for. Should it please your Excellency to take us under the shelter of your patronizing support, I pledge myself at all times to conduct the undertaking in a manner satisfactory to the State, beneficial to the community, and creditable to the proprietors. What can I say more?

1st December 1829.

I have, &c.
(Signed) J. W. TAYLOR.

P. S.—With reference to the foregoing proposal, it is necessary that I should distinctly explain that its scope and meaning is, if the Government should assent to its conditions, we will in return carry all *bona fide* Government despatches out and home free of charge.

PROSPECTUS of an Establishment of STEAM VESSELS.

THE object of the undersigned is to establish a regular communication by means of steam vessels navigating the Mediterranean and Red Seas, between London and the different Presidencies of India. The experience afforded by passages made by steam vessels on certain parts of the route selected, justifies the expectation that intercourse between the two countries may thus be effected in from fifty-four to sixty days.

The

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continued

(19) Letter from
Mr. J. W. Taylor to
Sir J. Malcolm,
1st Dec. 1829

The establishment of steam vessels raised by the undersigned is competent to maintain a regular intercourse of the above nature twice a month. The advantages of such a frequent communication with England, properly organized and conducted, are various and important; intelligence will be more rapidly and regularly conveyed; the two countries, by effecting intercourse between them in half the time now requisite for the purpose, will in reality be brought by so much nearer each other, and the commercial operations of the mercantile world will receive all the stimulus necessarily connected with a more speedy means of communicating with the mother country; the benefits derived by Government in the respect of more recent official news will be equally signal and valuable. It is the object of the undersigned to carry both passengers and letters according to the terms and conditions hereinafter mentioned. In respect to letters, the undersigned is prepared with a plan for carrying all such as he may be entrusted with, in such a manner across the Isthmus of Suez as will render it almost impossible, unless considerable and culpable violence be used, for the paper on which the letters may be written to receive or to communicate infection. The efficacy of this plan he is ready to submit to the decision of any committee of scientific or practical individuals that the Government may select to report upon it; it being only previously understood that the details which the undersigned may on this subject communicate are to be received in strict confidence by the committee. In respect to passengers, they will, while in transit across the Isthmus of Suez, be solicited to conform to such not inconvenient regulations as to their clothing and conduct, as will greatly lessen their own liability to be considered capable of communicating infection, and will thus shorten the period of quarantine to be imposed on them on their arrival in England to a term almost quitenominal.

For the comfortable passage of the small strip of desert composing the Isthmus of Suez the undersigned has also made peculiar arrangements; he has had a kind of carriage made by Messrs. Baxter and Pearce, furnished with very easy cross and lateral springs; the whole so constructed as to fit into a common camel saddle for fastening on the back of a camel; the varied action of those springs will entirely nullify the unpleasant motion of the animal, and will make the conveyance altogether as easy as a sedan chair; at night the carriage itself will make into two comfortable beds. With this preliminary detail of the preparations made, the plan will be, that vessels on both sides of the Isthmus of Suez shall start contemporaneously from London and Calcutta (having branch vessels for Bombay, Penang, and Mauritius plying in concert) on the 1st and 15th of each month; that the passengers from Europe shall be taken to Damietta on the Mediterranean boats, thence carried across to Suez to meet the Indian vessels, which by that time will be in waiting there to receive them, and which having landed the passengers they may have brought from parts of India to Suez, will immediately return with the passengers taken on board at Suez; the passengers landed at Suez from India will in their turn be immediately conveyed across the desert to Damietta, where the London steam vessels will be found in waiting to carry them onwards to England. The alternation of this system as the different steam vessels arrive at Damietta and Suez, will complete the plan for the regular and uninterrupted communication between the two countries.

The undersigned has proposed to combine with the carriage of passengers the transport of all the letters, public or private, passing between England and India; the arrangements already referred to, by rendering any fumigation unnecessary, will obviate all the unpleasantness to correspondence resulting from that operation; while the regular system of arrival and departure twice a month, with the far speedier mode of delivery itself, will confer the most decided benefits on commerce and private correspondence, which have hitherto been both inconvenienced by irregularity and delay, or disturbed by intervals of six months' non-intercourse with or non-arrival from England.

The undersigned also proposes to introduce such a sufficient number of steam vessels immediately into India as will admit of an equally regular and frequent intercourse being maintained between the three Presidencies and all principal parts of India, as is above proposed between them and London.

The

The undersigned is also willing to bind himself to furnish all officers belonging to His Majesty's or the Honourable Company's civil, naval or military services, as well as all gentlemen, agreeing to send and receive all their letters for and from Europe by these steam vessels, for the period of two years, on the terms hereinafter mentioned as agreed to be paid to Mr. Waghorn, with passages to and fro between England and India on these steam vessels, for which passages he will only charge them the prices fixed by the regulations of the Honourable Company; for which prices he will at all times keep up a good table, and will bind himself to observe time on the passage as far as possible.

The advantages thus proposed to the gentlemen of the different public services in India, as well as to all those making themselves thereto entitled by conformity with the conditions prescribed by the foregoing article, in the carriage of their letters twice as quick as is done at present, and in enabling them to get to England in half the period of time now necessary, at an expenditure not only fixed and certain, but also far below what it now costs them, will, it is hoped, be sufficiently evident to induce them to agree to the terms on which the said advantages may be commanded, viz. that they will for two years to come have all their letters conveyed by these steam vessels, paying for the same for that period the same rates for letters as have been agreed to be given to Mr. Waghorn, of the Bengal pilot service, for all the letters carried by the steam vessel he went home to build and equip; if this be agreed to, the undersigned will, at the expiry of the two years, continue to carry the letters free of all steam postage, and will also continue the other advantages of the concern on the terms already mentioned.

Should the public of India acquiesce in the proposals thus made, and agree at once to have all their letters conveyed by his steam vessels for two years on the prescribed terms, the undersigned pledges himself to have the first vessel at sea within three months from the period of such public assent, and that the others shall follow without intermission in due and regular order, as is herein prescribed.

India has thus the opportunity of bringing herself within little more than six weeks of England; the community may command a rapid and regular mode of constant intercourse with their native land; will never again labour under the inconvenience of six months' non-intercourse with England; and, above all important to invalids in India, they may command the means, hitherto unfortunately too difficult of realization, of passing quickly and certainly to sea, should illness or debilitated constitution render a sea voyage indispensably necessary to their recovery.

Should the foregoing considerations induce the Indian public to honour the undersigned by adoption of his proposals, he pledges himself to omit no possible exertion to give that general satisfaction which, after all, must prove the best guarantee for his success, and as he hopes his plans will be found to be well laid, and his arrangements judiciously brought into order, he trusts the approbation and cordial support of the public, will prove the need of his long-continued endeavours to construct the establishment herein offered to their patronage.

December 1st 1829.

(Signed) J. W. TAYLOR.

SCALE of PRICES agreed to be paid at *Bengal* and *Madras* to Mr. Waghorn, per Letter:

Per letter of one sicca weight, if delivered in seventy-five days, three rupees; if in eighty-eight days, two rupees; if in 100 days, one rupee.

Exceeding two sicca weight, treble the above prices, according to time of delivery; and so on for increased weights.

Newspapers the same as letters of one sicca weight.

Law papers per ounce, the same as for letters of one sicca weight.

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continued

(20) Letter from
Mr J. W. Taylor,
to the Bombay
Government,
21st March 1830.

(20).—LETTER from Mr. J. W. TAYLOR to the Governor in Council of *Bombay* ; dated March 21st 1830.

Honourable Sir:

I HAVE in a public letter herewith accompanying, already had the honour of submitting for the consideration of your Excellency, certain proposals for the immediate establishment of an extensive line of first-rate steam vessels, intended to ply periodically between England and India.

As that letter, however, was written in Egypt, and as on my tedious voyage from thence I have had abundant opportunity of reconsidering the subject, I am desirous of being permitted to address to your Excellency a few additional remarks, calculated to elucidate our object, and to place the undoubted advantages offered by our establishment to the State and community in the clearest possible light.

In the first place, since to ensure, beyond chance of failure, the proposed regularity and frequency of departure twice a month, both for and from England and India, it will be necessary to have spare vessels oppositely posted on both sides of the Isthmus of Suez, the proprietors will engage, with the view of more entirely meeting the convenience or exigency of Government, to have a steam vessel constantly ready to depart on seven days' notice, should any sudden and unforeseen state urgency render it expedient for Government to send away a public despatch expeditiously and immediately. In this case the proprietors will only expect to be reimbursed in the extra expenses actually incurred by the extra trip, such as full pilotages and port charges. At a cheaper rate than this Government will hardly be able to command such a certain medium of forwarding urgent important despatches. The whole establishment will also, if desired, be generally placed under the control of Government, the prescribed order of departure only not being broken in upon.

In the second place, the average of letters proposed to be struck has reference only to the private letters of the community passing through the post-office, and does not include bulky packets of Government, which will at all times be carried without charge; and though at first view the postage rate sought to be levied for two years on all the letters of the community, may seem to impose a tax not hitherto borne by the public, a slight examination will show that it is not so. I prove it thus: It is well known that every gentleman going to England on a sailing vessel, by the way of the Cape of Good Hope, is put to a heavy expense in providing an outfit of linen for the voyage. This, under the arrangements we have made, will be altogether superfluous on the steam vessel, because the ordinary stock of linen forming the wardrobe of a British gentleman in India will here amply suffice; and thus if any sender of letters becomes also a passenger per steam vessel, he will save the entire expense of this outfit, and so lay up a sum of money amply sufficient to defray the postage of all the letters he is likely to forward or receive during the two years for which postage is sought to be made payable; the public, as well as the State, will thus be able to enjoy the benefits of our establishment gratis.

In the third place, referring to the plan mentioned in the Prospectus for preserving the letters from possibility of receiving or communicating infection during transit, I stand ready to submit the details of the same for the examination and decision of any scientific or practical committee your Excellency may name to report upon it. Lastly, it has been the object of myself, and those associated with me, to make these our plans as perfect, as extensively useful, and withal as cheap as possible; by such means we look for that decided support from Government and individuals which alone is wanted to give a permanency and a success to our concern. If your Excellency will do us the honour to patronize the undertaking, and on the sum of the many advantages we shall secure to all ranks and interests, public and private in India, to grant our request, we would wish to signalize and mark the era in which so vast a change has been permitted to be wrought in the commercial and social relations of England and India, by soliciting your

your Excellency's gracious authority and sanction to our naming our establishment "The Malcolm Line of Steam Packets," thus enabling us to point out to the world the master-mind and munificent fostering patronage of that individual to whom India will thus have become indebted for what may fearlessly be pronounced the greatest boon ever sought to be conferred upon her.

Bombay, March 21st 1830.

I have, &c.
(Signed) J. W. TAYLOR.

(21.)—LETTER from Mr. J. W. TAYLOR to Sir SIDNEY BECKWITH, Vice-President in Council at Bombay, dated Bombay, 30th March 1830.

(21.) Letter from
Mr. J. W. Taylor
to the Bombay
Governor
30th March 1830

Honourable Sir :

In conformity with the permission which your Excellency was pleased to honour me with yesterday, I now beg leave to submit a modified proposition of the terms on which it will still be practicable to enter on an immediate commencement of operations with the establishment of steam vessels, which I have already had the honour to bring under the notice of Government.

Your Excellency will perceive in the proposition as now submitted a material alteration in the terms of our original offer, an alteration which I respectfully hope may bring the whole arrangement so entirely within the views of Government expediency as to lead to their approving and adopting its conditions, subject only to confirmation of the Honourable Court of Directors, which confirmation, under a strong and distinct expression of the sense which Government may entertain of the general eligibility of the measure, and of the great advantages promised to the State and community thereby, I feel satisfied the Honourable Court would not be slow in acceding

I beg also respectfully to state, that if Government honour me by deciding on my proposal before the 10th of the coming month, I pledge myself to be in England in seventy days thereafter.

I have, &c.
(Signed) J. W. TAYLOR.

With reference to the proposition which Mr. Taylor has already had the honour of submitting for the approbation of the Right Honourable the Governor in Council relative to the immediate establishment of an extensive and regular steam communication with England, he has been given to understand that difficulties may possibly arise rendering it inexpedient for Government to assent to the terms submitted, and that however favourably it might feel disposed towards the proposal generally, or however strong might be its wish and desire to see such a rapid and regular mode of intercourse with England set on foot in the manner proposed, even under support from Government, an indirect period might possibly be put to the negotiations, unless some modification of terms more consonant with the views of Government as to the question could be reconciled with the interests and outlay of the proprietors of the steam vessels.

It being Mr. Taylor's object, and he may say his interest, to make his proposals as acceptable to Government as he can, reference being had to the said outlay, he has reconsidered his original proposition, and now ventures to submit to the Right Honourable the Governor in Council a new arrangement, which he hopes will be found divested of all previous objections, resting on data which Government can consistently admit, and leading to a line of conduct which Government may with propriety adopt.

The result of Mr. Taylor's inquiries in Bombay, as to the state of the public feeling in respect to the rate of steam postage fixed by Government for their armed steam packets,

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continued.

(21) Letter from
Mr J W Taylor
to the Bombay
Government,
30th March 1830.

leads him to be of opinion that it would generally be paid with readiness in a case when, like the present, steam power would be available to forward the letter all the way to England and back, and therefore that a very considerable proportion of the correspondence of the public would be confided to this more rapid mode of conveying it. The mercantile part of the community, whose letters are of most importance, would, it is evident, from a strong sense of interest, be compelled almost always to send their letters by steam; because the quicker transmission to be expected from this mode of conveyance would place those who did not use the opportunity in a situation much more disadvantageous in respect to their mercantile advices and operations than they who did; the non-mercantile public may well be supposed to feel a greater desire to write by that conveyance which would generally bring them an answer to a letter sent in less time than by the ordinary route would be requisite to convey the letter itself, while Government would derive an incalculable advantage in the greater rapidity and regularity of their advices from the seat of controlling authority at home; as well as in greater proximity which such a line of steam packets would establish for India, to the power and protection of the mother country.

Arguing on the operation of these various causes to induce a general preference in India of the steam packet for conveyance of letters over the sailing vessels, Mr. Taylor ventures to imagine that he will not be considered to have formed an over-sanguine estimate of the amount of letters that will annually pass by steam out of the whole Europe correspondence of India, in fixing it at one-third of what now annually passes round the Cape of Good Hope on sailing vessels; he trusts, therefore, that the accuracy of this hypothesis will be so far admitted by the Government as to induce them to agree to found thereon the measures which Mr. Taylor respectfully submits for adoption.

Under a belief that Government must naturally wish to see a well-organized steam communication set on foot, and that it is disposed to give it a proper degree of encouragement, Mr. Taylor would respectfully propose that the Bombay Government should do him the honour of making him the bearer of a special despatch to the Honourable Court of Directors, wherein mention should be made of his proposals to organize the establishment of steam vessels already submitted, adding that Government were so far fully convinced of the incalculable advantage flowing to India, and the services generally, from the operation of such a rapid mode of intercourse, and were also so entirely satisfied of the strong support it would receive from all classes in India, that they strongly recommended Mr. Taylor's proposals for adoption by the Court; the said proposals being, that all his former intentions relative to the arrivals and departures twice a month, to the carrying the packets and passengers, to the price of passages, should be adhered to, together with that of the maintenance of an extra packet; but that the Bombay Government, as a reward to the proprietors for their risk and outlay in the concern, should be permitted by the Court to give these steam vessels the right of receiving on all letters entrusted to them by the public for dispatch in India, or brought by them from England, for the term of five years immediately following their commencing to run, the rates now fixed by the Honourable Company's armed steam packets, it being understood that Government are allowed by the Court to add a guarantee, that such aggregate of letters so to be carried and paid for shall amount annually to one-third of the present average of the total correspondence of all India per the sailing vessel.

This being done, and the executive authorities in Bombay consenting to express in clear and distinct terms their conviction that such a guarantee may be safely given, or, in other words, that in their opinion the annual number of letters transmitted by steam would not fall short of the one-third assumed; and that a strong and decided feeling in favour of supporting such an undertaking existed throughout India, both with the governments and communities; Mr. Taylor will immediately go to England for the purpose of immediately setting the establishment on foot on the scale and basis as now proposed, and he will engage to have his first steam vessel at sea on her way to India, being

being duly followed by the others, within twenty-one days of his being honoured with the acquiescence of the Court of Directors in the proposals now respectfully submitted for them to sanction: which sanction, under the operation of the powerful steam authorities with whom he is now so happy as to be associated in England, Mr. Taylor nothing doubts of obtaining, if the Government view of the question be but as clearly and strongly expressed as it has been herein suggested that it might be.

It is of course expected, if anything be done under this proposition, that the aid of the Mofussil post offices will be accorded in the collection of the steam postage, and in transmission of the letters sent in, not in any way interfering with that leviable on inland carriage. If a reply be given before the 15th of April, and such reply should be of a nature to induce Mr. Taylor to start for England, he would engage to run a steamer, in concert with the Hugh Lindsay, on the Mediterranean sea by the 15th of July next, such being a temporary measure till the regular steam vessels can reach their respective destinations on the Suez side of the Isthmus, and so commence on their duties with greater certainty of regularity in their proceedings.

Bombay, 3d March 1830.

(Signed) J. W. TAYLOR.

(22.)—LETTER from Mr. J. W. TAYLOR to J. P. WILLOUGHBY, Esq., Secretary to the Bombay Government, dated Bombay, 3d April 1830.

Sir:

I HAVE already had the honour to bring under the notice of the Right Honourable the Governor in Council certain proposals for the immediate establishment of an extensive line of communication between England and India, by means of steam vessels periodically leaving both countries.

In an interview with the Honourable the Governor with which I was yesterday honoured, and at which the chief secretary, Mr. Norris, was present, the above proposals were fully discussed, and I was desired immediately to forward to you a schedule of a new arrangement, the conditions of which should be based on the understanding had at the above interview.

In conformity with such command I now do myself the honour to hand you the inclosed written Memorandum, in which I believe the Honourable the Governor will recognize a due preservation of the exact spirit of the conversation that so passed between us.

Considerations connected with the rapid wane of the favourable seasons for passing expeditiously to Europe *via* the Red Sea, render it expedient, if a commencement of operations this year is desired by Government, that I should be able to leave Bombay for England as quickly as possible, and as, if honoured with a prompt decision in the case, I should myself be ready in a few days, I respectfully solicit the favour of your submitting this paper to the Governor in Council with as little delay as possible.

I have, &c.

J. W. TAYLOR.

MEMORANDUM of Mr. TAYLOR's Proposals to Government for the Carriage of the Public Mails to England and back on Steam Packets, going twice in every Month.

The number of letters which pass annually round the Cape of Good Hope on sailing vessels, but on which no sea postage is payable, has amounted as under:

From Bengal out and home	...	...	...	...	...	1,38,673
— Madras —	...	...	...	...	...	92,134
— Bombay —	...	...	...	...	...	63,400
						<u>2,94,107</u>

APPENDIX,
No. 25.
continued

(22.) Letter from
Mr. J. W. Taylor
to Secretary to
Bombay
Government
34 April 1830

or say three lacs of letters. The above information for Madras and Bengal rests on the authority of the respective postmasters-general of those places; that for Bombay has been taken on an assumption that this presidency dispatches and receives annually one-third fewer letters than Madras.

By the Government armed steam vessels Government have lately carried letters, and have charged thereon certain rates of steam postage, in addition to the inland rates, which have both been cheerfully paid by the public, although, under the arrangements made by Government, the letters so sent could only be forwarded by steam as far as Cossier or Suez, the further progress of the packets to England being determined by the best ability of the Consul-general at Alexandria, Mr. Barker.

The readiness shown by the public to avail itself of the opportunity of so limited a system of steam carriage, as evinced in the numbers of letters sent by the *Hugh Lindsay* and *Thetis*, affords a fair presumption that a decided preference would be given to an establishment of steam vessels going regularly and carrying the letters by steam all the way to England.

At the above rates of postage, it is assumed that at least two-fifths of the total annual number of letters going on sailing vessels round the Cape of Good Hope, and not subject to any postage, would at least be annually sent on the steam packet, though bearing the rate paid for those forwarded per *Hugh Lindsay* and *Thetis*; at this rate of calculation and payment, the annual revenue thus accruing would amount to rupees 4,80,000; it might amount to a much larger annual sum.

It is proposed to Government to avail itself of the services of the establishment of steam vessels already brought under its notice by Mr. Taylor, employing them as carriers of letters merely; all details as to dispatch and receipt of the letters, as to the collection of postage, and rates to be levied from the public, being left wholly to Government; the carriers engaging to start twice a month regularly, both from London and India, to deliver their boxes of letters without fail in sixty-five days, subject to a penalty of so much per cent. on the hire for every ten days in excess of sixty-five days, which may be consumed in the passage out or home (sixty-five days being expected to be the maximum length of passage, the amount of penalty is left to Government to fix), and to have a steam vessel constantly ready to start on seven days' notice with despatches, should a sudden and emergent occasion arise for their being forwarded with particular celerity to England, Government in such case being entitled to the services of the vessel, machinery, officers, and crew gratis, only paying the extra expenses of boats, pilot, and port charges actually caused by the extra trip.

For the performance of the above service on the above scale, a monthly hire of rupees 35,000 is to be paid month by month, the said hire to commence as soon as five steam vessels, of about 500 tons burthen and 120-horse power each, have reached India, fully fitted and equipped, in readiness to ply on the Indian side of the Isthmus of Suez, in concert with four others of similar size and engine power, intended to preserve the line of communication on the European side of the said isthmus.

It is further stipulated, that in the event of the public yielding a hearty and decided support to this establishment, and of their letters being so freely sent by those steam packets as to produce an annual revenue to Government exceeding the sum of rupees 4,80,000 at which it has been assumed, all excess above that annual sum is to be equally divided between Government and the steam-packet concern.

The above engagement to last for five years certain, and not then to be determinable without one year's previous notice.

(Signed) J. W. TAYLOR.

(23.)—LETTER from the Assistant Superintendent of the *Indian Navy* to the Secretary to the *Bombay Government*, dated April 17th 1830.

Sir :

In reference to your letter of the 8th instant, I have the honour, by directions of the Superintendent of Marine, to transmit to you for the information of Government the accompanying Estimate Statement, showing the expense of building and sailing, including repairs, of the *Hugh Lindsay* steamer.

I have, &c.

(Signed) R. COGAN, Assist. Supt.

APPENDIX,
No. 25.
continued.
(23) Letter from
Assistant
Superintendent of
Indian Navy to
Secretary of
Bombay
Government,
17th April 1830

ESTIMATED STATEMENT showing the Expense of Building and Sailing, including Repairs, of the *Hugh Lindsay*, Steamer.

Cost of hull, machinery and stores of the vessel, completely equipped ... Rs. 3,52,071

ANNUAL EXPENSE.

Amount supply of stores of every description and repairs	...	Rs. 8,000
— of provisions for the crew, &c.	...	7,500
— of coals	...	71,400
— pay of the officers and crew	...	37,626
Interest on the block and machinery, at 6 per cent.	...	21,538

Annual Expense of sailing the vessel ... Rs. 1,46,064

(Signed) M. HOUGHTON, Secretary.

Bombay Marine Board Office, 17th April 1830.

(24.)—LETTER from the Postmaster-general at *Bombay* to J. P. WILLOUGHBY, Esq., Acting Secretary to Government, dated April 1830.

Sir :

In obedience to the orders conveyed to me by your letter of the 10th instant, I have the honour to inclose you a statement of the actual amount of postage received on letters dispatched to England *via* the Red Sea.

2 I beg to inform you that no letters were withdrawn from this office in consequence of the *Enterprise* not proceeding to her destination. All that had been received to be transmitted by her were dispatched on the *Thetis*, though I have no doubt a much greater number would have been received for transmission, had not a sailing vessel been substituted in her stead. The date of the departure of the *Hugh Lindsay* was not known in time to enable persons residing at distant stations to send letters by her: this is the cause of the small number sent by her.

3. Supposing that a steamer were to leave Bombay with packets for England every three months, I am humbly of opinion that these packets would not contain fewer than 1,500 letters, the postage on which might amount to 7,000 or 8,000 rupees, as several of them would be double and treble letters. This calculation is made on the supposition that the steamers left at stated periods, and that these periods were known all over India.

I have, &c.

(Signed) J. BOURCHIER,
Postmaster-general.

(24) Letter from
Postmaster-
general
to Secretary to
Bombay
Government,
April 1830.

11. FINANCE. 1002 APPENDIX TO REPORT FROM SELECT COMMITTEE.
Commercial.

APPENDIX,
No. 25.
continued.

STATEMENT of POSTAGE collected on Letters transmitted to *England* by the
overland Mails:

Continued.

(24.) Letter from Postmaster- general to Secretary to Bombay Government; April 1830.	To the amount of postage collected on letters dispatched by the "Thetis" on the 17th November 1829:				Rs.	Rs.
	At Bombay, on 297 letters				1,492	0 0
	At Subordinates, on 61 letters				244	0 0
					<hr/> 1,736 0 0	
	To the amount of postage collected on letters dispatched by the "Hugh Lindsay" on the 20th March 1830:					
	At Bombay, on 249 letters				1,176	0 0
	At Subordinates, on 57 letters				228	0 0
					<hr/> 1,404 0 0	
					<hr/> Rs. 3,140 0 0	

Bombay General Post-office,
12th April 1830.

J. BOURCHIER,
Postmaster-general.

(25.) Extract
Public Letter from
Bombay,
23d June 1830

(25.)—EXTRACT PUBLIC LETTER from *Bombay*, dated 23d June 1830.

5. We beg to bring to your Honourable Court's notice the Report of Mr. Waghorn, of the Bengal Pilot service, connected with his voyage overland, *via* the Red Sea, from England to Bombay.*

6. Being of opinion that he evinced great zeal and activity in the performance of his journey to Suez, and subsequently, when disappointed of a steam vessel, by proceeding in an open boat to Judda, and considering him entitled to be remunerated for his actual expenses in effecting this journey, in consequence of his being the bearer of despatches for the Supreme Government, we have sanctioned the payment of his bill of expenses, amounting to £320. 1s.

7. We have referred Mr. Waghorn to the Supreme Government for any further consideration he may conceive himself entitled to, either on account of this service or for his continued efforts to promote a communication by steam between Calcutta and England.

(26.) Extract
Letter from
Mr. Waghorn to
Sir C. Malcolm;
March 1830

(26.)—EXTRACT LETTER from Mr. WAGHORN, of the *Bengal* Pilot service, to Sir CHARLES MALCOLM, Superintendent of the *Indian* Navy, dated March 1830.

I HAVE the honour to report (for the information of the Honourable the Governor in Council) my arrival here with dispatches *via* Red Sea, leaving England 29th October 1829.

Also, the motives that induced me to this journey, *viz.* a wish to meet the experiment that was intended by the steamer "Enterprize," at Suez, likewise to promote steam navigation with England and India.

I am positive, had the steamer been at Suez on my arrival, the communication between
London

* 1830: General Consultations, 14th April, Nos. 17 to 27; 28th April, Nos. 69 and 70.

London and Bombay would have been effected by my landing at Bombay in fifty-seven days, all stoppages included by land and sea.

I performed the journey of 1,260 miles from London to Trieste in nine days and a-half, and I confidently assert it was never done so quick before (posting), and the time lost being only twenty-one hours. My route (down the Adriatic and across the Mediterranean) to Alexandria was tedious, in a Spanish ship, who proved a bad sailer. I was seventeen days; a steamer would have done it in seven days. In Egypt I was induced to go by the Nile (from its Rosetta branch) to Cairo, although I was longer getting there.

I had a particular desire to judge of its capability for small steamers, and whether they would prove of any utility, &c. Experience on the Nile, added to the information I obtained, enables me to say they are of no service, from many obstacles; besides they are not required, for despatches can go by fast dromedaries

From Alexandria to Cairo in ...	...	...	...	40 hours.
From Cairo to Suez ...	...	...	...	22 ditto.
From Alexandria to Suez ...	...	...	...	62 ditto.
From Alexandria to Cairo ...	...	...	...	40 ditto.
From Cairo to Ginnah ...	...	...	...	75 ditto.
From Ginnah to Cosseir ...	...	...	...	35 ditto.
From Alexandria to Cosseir ...	...	...	...	150 ditto.

N. B.—It is to be understood that a regular set of couriers and dromedaries are kept for this purpose. The Pacha's post from Alexandria to Cairo takes thirty hours only; forty foot messengers run a certain distance in pairs till the whole is complete.

Not finding the steamer at Suez, I hired a native boat and sailed down the centre of the sea expecting to meet her (waiting seven days at Cosseir) on the way to Judda, and on my arrival there, on the 23d December, I first heard that the steamer was not coming.

It is my opinion that steamers will soon be established on account of dispatch with India, more particularly on the other side the Isthmus. It was with the view of being of service to "any steam navigation with India" I have come the present route, and I have only to state my opinion as a sailor:

First, That the Red Sea is perfectly safe for steam vessels.

Secondly, The safety of travelling in Egypt, and the dispatch, is beyond most other countries; in fact I should have no objection to ride from Alexandria to Suez on a donkey unattended, as far as safety is concerned.

Thirdly, I do not know any reason (if steamers were established at Alexandria to go either to Marseilles or Ancona) why the communication should not be at all times generally effected in fifty to fifty-five days.

APPENDIX,
No 25.

continued.
Steam
Communication
with India,
and on the Rivers
of India

APPENDIX,
No. 25.

(27) Journal of
Mr. Waghorn

(27.)—JOURNAL of Mr. WAGHORN.

ROUTE TO TRIESTE, ALEXANDRIA, SUEZ, AND JUDDAH.

Travelling. 41 Days; Delays. 14 Days.

PLACE.	DATE.	Distance.	Conveyance.	Time on the Road.	Delays on the Road.	Reasons for Delays.
Left London ..	28 Oct 1829, at half-past seven in the evening.					
Arrived at Dover ..	29 — — —	72	Coach ..	0 11½	0 3 at Dover ..	Waiting for steam-boat.
Boulogne ..	29 — — —	35	Steam ..	0 4	0 5 at Boulogne ..	Purchasing carriage for Posting
Paris ..	31 — — —	155	Posting ..	1 8	0 9 at Paris ..	Countersigning passport (for France)
Milan ..	6 Nov. ..	707	Ditto ..	4 19	0 4 at Milan ..	Ditto ditto .. (for Italy).
Trieste ..	8 — — at 9 a m.	273	Ditto ..	2 20	2 11 at Trieste ..	Waiting for ship to sail.
Alexandria ..	27 — — at 8 a m.	1,465	Ship ..	16 14	0 9 at Alexandria	
Arrived at Rosetta ..	28 Nov. at noon ..	33	Donkeys ..	0 19½	1 7½ Rosetta ..	At the Consul-general's.
Cairo ..	4 Dec at 8 p. m. ..	150	Boat on the Nile }	4 1½	1 19 Cairo ..	Vice Consul's.
Suez ..	8 — — at 8 a m. ..	72	Camel ..	2 18		
Left Suez ..	Time getting to Suez ..			33 18½	6 19½	
Arrived at Suez ..	9 Dec at 11 a. m. ..				1 3 Suez.	
Arrived at Cosier ..	13 — — at 8 p. m. ..	260	Native boat ..	3 23	6 7 Cosier ..	Waiting for Enterprize steam-vessel.
Juddah ..	23 — — at 3½ p. m. ..	400	Ditto ..	3 21½		
Time getting to Juddah	Distance, 3,622.			41 16	14 5½ Delays.	

(Signed)

THOMAS WAGHORN.

(28.)—REMARKS by Mr. BOWATER on the *Persian Gulf and Red Sea*, as applicable to STEAM NAVIGATION, for the purpose of opening a speedy Communication with *England* and her Territories in the East, *viâ* the *Mediterranean*, dated 17th June 1830.

THE first and most direct route that offers itself to the eye of the observer, is from Bombay to the Persian Gulf, and from thence up the Euphrates to Beer, crossing from thence to Alexandretta or Scanderoon by post, a distance of 120 miles.

The second, and most circuitous route is by the Red Sea to Cosseir, or Suez, crossing the Desert to the Nile, and descending down that river to Alexandretta.

That this scheme of opening a communication with England be carried thoroughly into execution, it is actually necessary the route should be open throughout the year, or otherwise it can never be of any permanent benefit to either country.

Therefore the primary object to be considered is this: to which of these seas have you the easiest access during the south-west monsoon?

The decision is decidedly in favour of the Persian Gulf, from the following reasons: a vessel bound to the Red Sea in that season would not have the monsoon until she arrived in the longitude of Cape Gardafui, and one to the Persian Gulf until she passed to the westward of Cape Raselhad, which is about 500 miles nearer Bombay than Gardafui; a vessel for the Red Sea would likewise have the wind and sea directly against her, which would not be the case if bound to the Persian Gulf, it lying in a north-westerly direction from Bombay, and the Red Sea to south-west. Since Sir Charles Malcolm has commanded the Bombay marine, cruizers have annually made the direct passage to the Gulf of Persia during the strength of the monsoon, leaving Bombay in the early part of August. On the other hand, the direct passage to the Red Sea in this season has never been performed, and in fact, I believe, never been attempted. From the rough and violent weather I have experienced in two passages (southern) to the Persian Gulf, in the months of July and August, when off the Island of Socotra, I have great doubts whether a steamer of even great power would be able to force her way against these stupendous obstacles; at any rate she would tear herself to pieces, and rarely last two voyages.

I have been informed by several officers who have frequently made the same passage, that they have always experienced the same weather.

The south-west monsoon on and near the coast of India is, generally speaking, a constant succession of violent squalls, rain and stormy weather, occasionally having thunder and lightning. On the coast of Africa and Arabia it completely changes its nature; there it blows a strong steady gale, which occasions a very high sea, but no rain whatever, and fine clear weather; this weather extends upwards of 200 miles to the eastward of Socotro. The cruizers formerly never made the direct passage to the Gulf of Persia during the south-west monsoon, but lower down between the Maldives and Lacadives islands and the Malabar coast, crossed the equator, and proceeded to the southward until they fell in with the south-east trade-winds, which was generally in about six or seven degrees of south latitude; they then steered west to run down the longitude, which having done, they recrossed the equator and steered north for Cape Raselhad, and it was always off the Red Sea they experienced the most severe weather throughout the passage; and I can say, from my own experience, the seas off this place in the south-west monsoon are very high indeed.

The navigation of the Persian Gulf along the Persian coast is open, free from danger, and well known, having been lately surveyed, and daily frequented in all parts by the Bombay cruizers, and offers every facility in stations to supply the vessels with coal and all other requisite stores and provisions.

During the winter months, that is, November, December, January, February, and March, the winds are variable from north-west to south-east, occasionally blowing fresh, and lasting about three days, but generally you have pleasant breezes from these quarters,

APPENDIX,
No. 25.
continued.

(28.) Remarks on
the Persian Gulf
and Red Sea
as applicable to
Steam Navigation.

ters, sometimes land and sea breezes. During these months with north-west winds you have fine clear weather; but dark rainy weather, with thunder and lightning, accompany a south-east wind. In April, May, June, and July the prevailing winds are from the north-west, sometimes fresh gales, lasting seldom longer than three days, but principally pleasant breezes, with a portion of light winds. In August, September, and October, light variable winds from all quarters, but principally from north-west, with light airs and calms and extremely sultry weather. The north-westers blow with the greatest fury, and are most frequently to be met with off the Verdistan Bank: here vessels bound up the Gulf often find them very troublesome, from the high sea and southerly current that accompanies those breezes; but there is a channel between this shoal and the main land where a steamer of a light draught could pass through in smooth water. The Red Sea, on the contrary, is not known to European navigators, replete with dangers, and is likewise as notorious for the bad weather constantly experienced in it as from its numerous shoals. In the months of October, November, December, January, February, March, and April the prevailing winds are fresh gales from the south-east, that extend from Cape Gardafui to the island of Gebel Zehaje, situated about 120 miles above Mocha, and from Suez down to these islands north-west gales are just as constant, attended by a nasty high, short, chopping cross sea, and clear weather; but you frequently have very violent squalls from north-west in the northern part of this sea. About once a month the north-west gales reach as far as the Straits of Babelmandel; but when this wind blows so fresh as to prevail against the south-east gales it is accompanied by cloudy weather and rain, lasting about three days, when the south-eastern sets in again with redoubled fury. In the months of May, June, July, and August, the north-west winds extend from Suez to Cape Gardafui. I sailed in the Honourable Company's sloop of war Elphinstone from Bombay on the 23d October 1828, with despatches for the Red Sea to be landed at Cosseir; we had pleasant north-east and northerly breezes and smooth water until we passed Gardafui; we there got a fresh south-east breeze, and passed Mocha on the thirteenth day. This breeze carried us as high Gebel Zehaje; from thence to Cosseir was a continual struggle against north-westers, where we arrived on the thirtieth day, which was considered a remarkably good passage, but our vessel was the fastest sailer in India. I am sure an ordinary sailing vessel would have been much longer making this passage if she had had the same winds. On attempting to beat down from Mocha to the Straits of Babelmandel against the south-east winds, on our return to India in January 1829, we sprung our fore and main yards, and were compelled to put back to fix them, and from their shattered state were obliged to wait for a north-wester to carry us out of the sea. Mocha Roads is sheltered from southerly winds, but entirely open to the north-west, and when this wind set in it blew with such violence, and so heavy a sea broke in upon us, that while waiting for the captain to come off from the shore we parted from two chain cable anchors, and it was with the greatest danger and difficulty we succeeded in weighing the third anchor. There are two methods pursued in navigating this sea; the body of the shoals lay principally along the line of both coasts, having deep narrow channels between them. The European vessels navigate the centre of the sea to keep these dangers as far distant as possible, and of course meet with rough weather, high seas, and strong currents. Native vessels, to escape this, prefer navigating the inner channels, when they are obliged to anchor every night; they are so very numerous, and principally lying under water, it being utterly impracticable to take a vessel between these reefs in the night; the only guard you have in the day is the discoloured water and breakers when it blows fresh, the land not being in sight, the weather being so very hazy and thick in this sea. It is now being surveyed by two very intelligent officers of the Bombay marine, Captains Elwin and Mousley, which, when finished, will no doubt obviate a number of objections to the navigation of that sea as it stands at present; but this is a very extensive undertaking, and must be the work of several years: but however minute the survey may be there still remains one objection, the want of a guide to warn you when approaching danger, for the reefs are so very steep too

too that the deep-sea lead is not of the slightest use, consequently that sea, from the number of reefs in it, however well known, must still be navigated at night with extreme caution and circumspection, particularly in bad weather. Not so the Persian Gulf; the lead there is a faithful guide to you in all parts, and may be boldly navigated at all times, void of risk in the worst weather.

Muscat bears from Bombay nearly W.N.W. about 850 miles, is a port belonging to a very ancient and faithful ally of ours, who would be happy to afford us any assistance in his power, and which offers every facility for receiving supplies from the shore, as a vessel can approach within a hundred yards of the beach, and what is a great desideratum, can be approached with the greatest safety at night-time; the shore is bold, high, and free of danger, and the only guide required to enter it is a light in shore, or on board of one of the vessels in the cove: the Imaum, if supplied with a code of night signals, would cause his ships to answer and attend to signals made by vessels off the port. It is likewise in the direct route to the Persian Gulf, more than half the distance to Bussorah; it is not frequently visited by vessels bound up the Gulf, not from its being out of their way, but from the frequent light winds and calms found near the Arabian coast, which is all in favour of steamers. Taking Muscat as the first station, there is every facility that can be required, and not one objection can be made against it in a nautical point of view; the supplies here would likewise be safe against the attempts of any enemy to cut them off when at war with an European or American power. A vessel that could steam nine miles an hour in smooth water, and carry seven days' coals, would reach Muscat on the sixth day, that is allowing her to be propelled at the rate of seven miles the hour, which I am confident would be sufficient allowance for adverse winds, currents, and other local impediments she may meet with; also for any deviation from the true course that may take place in her navigation during the months of September, October, November, December, January, February, March, April, and May; the winds at that season are from W.N.W. to N.E. a great portion of light winds and calms with smooth water; they would seldom be found to blow strong enough to make a sensible impression in the progress of a steamer. I have frequently made the passage during these months, therefore speak from experience. At Muscat, if assisted by boats and men, she would receive her coals, water, and such other provisions as were required, and would be ready in the space of three hours to take her departure for Bushire, touching if required at Bassidore, the western extreme of the island of Kishen, and the rendezvous of the squadron in the Persian Gulf, for the purpose of landing letters for the senior officer and the crews of the different vessels composing the squadron, or to land any officers or men she may have as passengers; it bears from Muscat N.W. 255 miles. Allowing the same rate of sailing (which I am confident, from six years' experience I have had in this gulf, is sufficient allowance for steam navigation throughout the year), she would arrive at Bassidore on the second day, and it has the advantage of lying directly in the route to Bushire. From this place she proceeds to Bushire for the purpose of landing packets for the British resident there; it is also in her route, and bears from Bassidore about 300 miles N.W. by W., and by passing up the channel between the islands of Polior, Khemi, Inderabia, Busheah, and the Persian coast, to avoid the north-westers, if blowing; also between the Verdistar bank and mainland, if advisable (but this would not often be required) she would arrive off Bushire on the third day. This port is not adapted for a station to receive supplies, the vessel having to anchor three miles from the shore in the inner roads; consequently, in blowing weather, communication from the shore to the vessel for the purpose of transporting stores would be very tardy (but she would not require coals here). Bussorah is distant 200 miles, where she would arrive early on the second day, passing on her way the island of Karrack, celebrated for its fresh water, and offering every facility as a station to have stores placed, as you can approach near the beach, and with perfect safety at all times. This island belongs to the Sheik of Bushire, and is fortified, and consequently safe against the designs of an enemy; however, it would only be requisite to have coals here as a stand-by in case of an accident, as the vessel would pass it on the fifth day

from

APPENDIX,
No. 25.

continued

Steam

Communication
with India,
and on the Rivers
of India.

APPENDIX,
No. 25.

continued.

(28.) Remarks on
the Persian Gulf
and Red Sea
as applicable to
Steam Navigation.

from Muscat. There is some little difficulty in finding the proper channel over the bar of the river at present, owing to the strong tides and want of landmarks, the coast not being in sight; but how easy this impediment would be removed by mooring a floating light in this channel! the river could then be entered and navigated as high as Bussorah by night-time, unless in very bad weather, and then only when there is no moonlight. Above Bussorah the river is not known to Europeans, I therefore cannot give a decisive opinion on the subject of its navigation; but from what I have seen of the river as high as Baghdad, and reasoning from analogy, I think twenty days from Bussorah would be ample time for the despatches to reach Alexandretta, thirty-three days from their leaving Bombay; at Bussorah the despatches must be removed into small steamers of light draught of water, peculiarly adapted for river navigation. The passage from Bussorah to Beer, when once performed, can always be accurately calculated upon, which cannot be done in navigated or open sea. In my opinion the length of the passage will not be longer in the south-west monsoon; although a vessel may be one day longer in her passage to Muscat, she will recover that time in her way to Bussorah, for it is during the monsoon months light winds are so prevalent in the Persian Gulf. From eight years' experience I have had of the south-west monsoon, I am aware that a steamer would have little difficulty in making the passage throughout this season: for even during the very depth of the monsoon, which is the latter end of June, all July and August, there are frequently intervals of several very fine days; and immediately she passes Cape Raselbad, only distant 770 miles, she escapes the monsoon. For the last three years a vessel has left Bombay in the early part of August and made the direct passage to the Gulf, getting out of the influence of the monsoon in about eleven days; this I advance as a strong support to my opinion for this reason, the greatest impediment a steamer can meet with is from a high sea; the month of August being the centre of the monsoon, surely if the sea in this month is found so moderate as to admit of a vessel working with success against it, there can be little doubt of a steamer performing it in half the time. The passage down the Gulf would always be equally as expeditious, and more so during the monsoon.

Aden bears from Bombay, nearly west by south, about 1,040 miles (double the distance to Muscat, and much out of the direct course): this must be the first station to have coals placed, and it certainly affords every facility at all seasons of the year, for you are completely sheltered from the south-east gales, in a bay on the north-west side of the Cape, and from the north-west on the south-east side of it. A steamer, supposing her to be propelled at the same rate as the one for the Persian Gulf, and which I think would be adequate allowance, would arrive at Aden on the eleventh day, during the months of October, November, December, January, February, March, April, and May; in these months they would meet with pleasant breezes from N. E. to W. N. W., and smooth water until they rounded Cape Guardafui, there they would fall in with strong steady breezes from south-eastward, except the month of May, when they would have light winds and calms from Bombay to Cape Guardafui, when they would fall in with north-westers not very strong, it being too soon for them. At Aden, with proper assistance, they would receive their supplies very quick, and depart for Cosseir, entering the straits of Babelmandel with the same wind and weather. Unless we have a floating light, either at the entrance of the large or small straits, or a lighthouse on the island of Perim, which would be preferable for vessels either going to or coming from India, vessels coming through these straits in the night would be obliged to heave-to until day-light, thereby causing great delay. The next port is Cosseir, where of course she will land her packets; for by having a steamer lying on the Nile at Jenna (distant about 130 miles from Cosseir) they would be on the Mediterranean on their way to England before a vessel possibly could reach Suez, for it is in the sea of Suez the north-westers blow with all their fury through the year, particularly in the lower part: the straits at the entrance of this sea are likewise extremely dangerous, and, however well known, would never be entered at night-time. Cosseir is more than 1,000 miles from Aden, consequently she would be off port on the seventeenth day from Bombay; allowing her the same rate of sailing, her despatches would reach

reach Jemsa on the twentieth day, and Alexandria on the twenty-third or twenty-fourth day from the date of their leaving Bombay, provided there was a steamer on the Nile ready to receive them; if not, they would be three or four days longer before they arrived in the Mediterranean sea. A vessel can easily obtain supplies at Cosseir, as you may approach near the beach, but it is only sheltered from the north-west winds; if easterly or southerly winds set in, the vessels are obliged to put to sea immediately, for the beach is so very steep you find no anchorage until you are close to it, and with these winds you have not room to ride or veer away cable. This is the least possible time the passage can be performed in (from Aden to Cosseir), making the same allowances I have for the Persian Gulf, and supposing the sea to be as easily navigated.

But I am convinced, from what I have myself experienced, and the information I have collected from officers who have frequently visited that sea at all seasons, that it is utterly impossible for a steamer of the greatest power to perform the journey in the allotted time; she may by chance succeed once or twice, but in my opinion it cannot by any means be depended upon as an averaged rate. The passage from Bombay to Aden during the aforementioned months can always be relied on; but from the obstacles she would find opposed to her passage up the Red Sea from Aden to Cosseir would delay her progress so much as to make it requisite to have Jemsa as another station, where she would receive a fresh supply of coals: this port is not at all adapted to the purpose, for it cannot be entered at night-time, from the numerous shoals that surround it in all directions. And if to avoid these impediments she navigated the inner channel between the shoals, she must inevitably anchor every night, which would infinitely counterbalance any other benefit that might be derived from this mode of proceeding. Every thing taken into consideration, I think the despatches might go to and from Alexandria in thirty-two or thirty-three days during these months, when the sea is accurately surveyed; but I am also of opinion that it is utterly impracticable for steamers to make the direct passage to the Red Sea in the months of June, July, August, and early part of September, for as I have before stated the weather is so very boisterous off the Arabian coast that a steamer would not make head against it; and if she did, it would be so slow, and from the great distance she would have to run before getting out of the monsoon, it would be impossible to carry the quantity of coals required, for she must be larger in bulk and swim deeper, consequently the influence of her engine is less, and she is propelled at a much slower rate, for if you increase the power of the engine the quantity of coals consumed also increases. But supposing the passage to be made, I am confident it can never be done in the time that would make it of any utility in sending despatches to England by this route during the south-west monsoon; the vessels would likewise be so roughly handled, that Government would find it a very expensive concern.

From the above remarks the following conclusions may be drawn in favour of the route by the Persian Gulf, supposing the Euphrates to be navigable as high as Beer: viz.

1st. The communication is open throughout the year, which is not the case to the Red Sea.

2d. It only requires a vessel to carry seven days' coals, water, provisions, &c. accordingly, which certainly is a very great object, as her speed will be so much the greater.

3d. Independent of opening a communication with England, it also answers the same purpose to and from the British missions in Persia, Russia, and Turkey, also with the senior officer commanding the squadron in the Persian Gulf, and the British resident at Bushire, scarcely going a mile out of her direct course.

4th. The great speed with which despatches would reach Bombay from England, owing to the velocity with which a steamer would come down the Euphrates having the stream in her favour; the greatest point is therefore fully attained, that of receiving earlier intelligence from the mother country regarding the state of European politics.

5th. The

APPENDIX,
No. 25.

continued

(28.) Remarks on
the Persian Gulf
and Red Sea
as applicable to
Steam Navigation

5th. The great advantage derived from one-third of the passage being river navigation.

6th. The great advantages this route has over the Red Sea, from the state of its navigation, and other local matters as mentioned in my remarks.

In the above calculation I have made what I conceive to be ample allowance for winds, weather, &c.; but I am confident the passages will be most frequently made in much less time, for it is a well-known fact the greatest cause of delay sailing vessels meet with in making the passages is from light winds in the Persian Gulf and boisterous weather in the Red Sea. All my remarks on the Persian Gulf are made from my own actual experience during six years' cruising in that sea.

Baghdad, 17th June 1830.

I have, &c.
(Signed) J. BOWATER.

(29.) Extract
Letter, from
Commander Wilson
to Sir C. Malcolm,
29th May 1830.

(29.)—EXTRACT LETTER from Acting Commander J. H. WILSON to Sir CHARLES MALCOLM, Superintendent of the *Indian Navy*; dated May 29th 1830

I HAVE the honour to report the arrival of the Honourable Company's armed steam vessel under my command, having in pursuance of my instructions made the passage to and from Suez by steam, touching at the different ports to procure coals, &c. as directed.

On arriving at Aden (on our way to Suez), an officer was immediately sent on shore with the letters and presents addressed to the Sultan, and with instructions to request that the coal might be sent off immediately; the officer shortly returned and stated that the sultan was at Layha (a town a few hours' journey inland) where he usually resided; the letters and packets had been dispatched to him, but the Sheik of Aden said he could not deliver the coal without orders from the Sultan. On the morning after our arrival I was informed that the Sultan wished me to visit him at Lahya, "when every thing could be settled;" a letter which I had in the meantime received from Commander Pepper enabled me to understand what was meant by "every thing being settled." As I was not provided with the means of meeting these demands should they be repeated, I requested the Sheik to write to the Sultan that the Government would be much displeased with the detention of the vessel; and if there were any demands on account of coal, the better way would be to give me at once what was required to take the vessel to Judda, and on my return for the rest, in my way to Bombay, I would settle all accounts. On the next day the shipment of coals commenced, but two days had thus been lost, three more were occupied in getting on board sufficient to make the passage to Judda.

On arriving at Judda, the letters to the address of the agent (Hussain Aga) were delivered, and although every exertion was made on my part to hasten the shipment of coal, four days and a-half passed in receiving sufficient to carry the vessel to Suez. As there is no want of boats or men at Judda, the loss of time in delivering coal must be in a great measure attributed to the agent being governor of the place; and as he would not take any part personally in the performance of that duty, it was left to a servant, who felt little interest about the matter.

On reference to the abstract from the log, it will be seen that on our arrival at Suez, one-third of the time elapsed since our departure from Bombay had been occupied in receiving coal. This, together with the vessel not having steamed quite so fast as had been expected, made it too late in the season for me to visit Alexandria, to communicate with Mr. Barker, as directed in my orders, and as the matter was left discretionary, I decided on not doing so, as the consequent detention would have prevented the Hugh

Lindsay

Lindsay reaching Bombay before the strength of the monsoon, to which, deeply laden as she must be to make the passage, it would not have been prudent to expose her.

In obedience to my orders I wrote to the secretary at the India House reporting the arrival of the *Hugh Lindsay* at Suez, enclosing a copy of the log, also a paper containing the result of my observations on the passage, a copy of which is herewith enclosed.

At Suez four days were occupied in receiving all the coal deposited there, about 100 tons, which done we left for Cosseir, it being necessary to take coal from thence, in order to have sufficient to make the passage to Bombay; on the day of our departure from Suez a packet was received from Cairo, from his Excellency the Commander-in-chief in the Mediterranean.

At this place two days and ten hours were occupied in receiving about fifty tons of coals, which with that on board was thought sufficient to last nine days; not considering it prudent to load the vessel deeply, as a hard north-wester might be experienced on the passage to Judda. At Cosseir about fifty tons of coal remain.

At Judda two gentlemen, Lieutenant Chester of the Bengal, army and Mr. Babington Madras civil service, applied for a passage to Bombay, and were received on board.

On arriving at Aden, I went immediately on shore to the Sheik, and requested him to commence shipping the coal as soon as possible, which he said he could not do before the next morning. I also requested him to inform the Sultan at Lahya, that I would pay the expenses incurred in shipping the coal on board the *Hugh Lindsay*, both now and on the former occasion; but that whatever demands there might be for expenses incurred in moving the coals from Back Bay to the town of Aden, when first landed there from the Buglahs, I would rather wish should be forwarded to Government by the *Hugh Lindsay*, as I did not feel authorized to pay them; the Sultan, I believe, acquiesced in this proposal, as the coal was immediately delivered, and I paid the expenses of shipping it on board the *Hugh Lindsay*.

At Aden we were detained five days and eighteen hours. This detention was not caused by the limited means the Sheik possessed to send off the coals only, but the weather was very unfavourable, having every day strong breezes, which prevented the boats from the shore getting to and from the vessel without being towed by others.

On reference to the paper to the secretary at the India House, it will be seen I submitted it as my opinion that, owing to the great delays in receiving coals at the different ports in the Red Sea, the communication would be best carried on by having only one depôt between Bombay and Suez, and a class of vessels whose consumption and stowage would admit of their carrying fifteen days' coal.

At that station boats and men in abundance would be found to embark the coals, and as it would be under the charge of a private individual, whose interest it would be to exert himself in the performance of such duties as were required of him, it would be more speedily executed than at Aden and Judda, where it was in the hands of the governor, who, though professing every wish to forward the service, performed it in a dilatory manner. The only objection to Mocha is, that strong winds prevail there from the southward from November till May; but this would be obviated, as vessels of the proposed class, drawing about ten feet, could anchor well in, in a line between the north and south forts, where they would be sheltered and in smooth water. At Aden, on the contrary, the means of embarking the coal are very limited, which certainly might be remedied in some measure by sending flats from Bombay for that purpose; but then were the coals deposited in Back Bay, as they should be for the steamers to receive them without hinderance from the weather, that place is so far from the town the Government must be at the expense of building godowns for it, and keeping up an establishment to take care of it when there, all of which might be avoided by having Mocha as a depôt. Another point to be considered is the great expense attending the purchase of coal at Bombay, and freight from thence to the Red Sea, as has been done in the present instance. I respectfully submit whether a great saving might not be effected by having the coal sent out from

APPENDIX,
No. 25.
continued

(29) Letter from
Commander
Wilson to the
Superintendent
of the
Bombay Marine,
29th May 1830.

England direct to Mocha, arranging so that the vessels should always arrive at Mocha with the first of the south-west monsoon. From thence having discharged the coal they might return freight to Europe, which would enable them to carry the coal to the Red Sea at a moderate rate, as the voyage home would not be lost. Part of the coal thus conveyed to Mocha might at the proper season be sent up to Suez for the dépôt there, the agent at Mocha performing that service on contract.

In the paper before mentioned (to the secretary at the India House) I proposed that vessels should proceed to Cosseir only; but having since visited that place I am of opinion it is not well calculated for a coal dépôt, as it is quite unsheltered from easterly and south-easterly winds, which would be experienced most in the season in which steam vessels would be running. I also in the same paper mentioned a report of coal being found in the mountains on the western side of the sea of Suez, which I have since discovered to have originated in a mistake of the natives, who have picked up pieces of bitumen on the sea-shore, and which they mistook for coal.

When the whole of the coal at Aden was on board we had at least one day less than when we left Bombay. By the greatest care in using it, by wetting and returning the ashes, it has been made to last the trip, and on anchoring in this harbour we had about four hours left.

In conclusion, I have much gratification in stating that the *Hugh Lindsay* has made the passage to Suez and back without any accident whatever. Trifling repairs are required, but nothing but what can be done by the engineers on board, excepting one of the holding down bolts, carried away during the last north-wester experienced in the Red Sea, to replace which it will be necessary to haul the vessel into dock. The boilers require caulking, a new set of firebars are wanted, and also a set of new circles for the paddles.

(30) Letter from
Commander
Wilson to the
Secretary to the
Court
of Directors,
23d April 1830.

(30).—PAPER sent by Commander WILSON to the Secretary to the Court of Directors, dated "*The Hugh Lindsay*," Roads, April 23d 1830.

THE *Hugh Lindsay* is of a beautiful model, an excellent sea boat, and steers well; her burden 411 tons. By the builder's plan her intended draught is 11 feet 6 inches, at which she would carry little more than five days' coal; having necessarily been laden far beyond that to perform the passage to the Red Sea, a fair estimate of her speed can hardly be formed. Stating as she did so heavily laden, trimming ballast could not be taken on board, and as the great body of coal lay abaft the centre, when she lightened it was impossible to bring her into proper trim. Although the chain cables, the only things moveable of material weight, were got aft, she being thus deeply laden, or when not so quite out of trim, it is not surprising that she has not exhibited greater speed.

On her arrival at Aden there remained only about six hours' coals, which shows her not calculated for the navigation up this sea, as in so long a passage a vessel should at least carry three days' coal extra to meet any unforeseen detention. Another objection to a vessel of her class is the expense her great consumption of coal must put the Honourable Company to.

It has been thought that if the stage from Bombay to the Red Sea could be divided, by establishing a dépôt for coal either at Socotra or on the Arabian coast, somewhere about Cape Morebat, it would facilitate the communication; but I am inclined to think it would rather retard than expedite the object in view, both from the local disadvantages of the places which must be used where vessels cannot approach the shore near, and the dilatory manner in which the coal is delivered at Aden and Juddah, which shows the difficulty, or indeed impossibility, of inducing the Arabs or Turks to perform any engagement with the prompt celerity and punctuality so necessary in this case; further arrangements might possibly be made by which the delivery of coal at the different dépôts would

would be expedited; but it must be borne in mind that, when all that is possible shall be done, the coal can never be shipped with any thing like the dispatch it is in England, where every aid that mechanical ingenuity and local facility affords is available. For the above reasons I think the fewer depôts the better, and am of opinion that the communication with Suez would be best carried on in two stages, one from Bombay to Aden, and from thence to Suez direct; the expense attending several depôts would thus be saved, and much delay avoided.

I may here observe, that every object in view in the overland communication would be equally well attained if the vessels went no higher than Cosseir (as far as passengers are concerned the majority would prefer landing at that place), the route from thence affording an opportunity of visiting the remains of antiquity in Egypt; and the conveyance of despatches would be the same within twenty-four hours, as the time it would take a steam vessel to go up to Suez from the parallel of Cosseir would be equal, within twenty-four hours, to the additional time requisite for conveying despatches from Cosseir down the Nile to Cairo; thus the expense in consumption of coal on the passage to Suez would be saved, and but little if any time lost.

In conclusion I would submit, as my opinion, that the class of vessels fittest for the navigation of the Red Sea would be such as could be propelled by engines whose consumption should not exceed nine tons in the twenty-four hours, and which should carry fifteen days' coal at that rate of consumption; and such vessels would, I am of opinion, be fully capable of performing the passage from Bombay to Cosseir or Suez in two stages, as before proposed.

It may be worthy of notice, that I heard a report at Juddah that the hills composing what is called in the charts "The High Land of Zeile," situated on the western side of Suez, and distant from that place about 140 miles to the southward, produce coal in considerable quantities; if this be fact it may be worthy of further investigation, as in case arrangements could be made with the Pacha of Egypt to convey coal to Suez for the use of our steamers, a great reduction might be made in the expense attending the steam navigation of the Red Sea.

(Signed) J. H. WILSON.
Acting Commander.

APPENDIX,
No. 25
continued(30) Letter from
Commander
Wilson to the
Secretary to the
Court
of Directors,
23d April 1830ABSTRACT from the Log of the Honourable Company's Armed Steamer *Hercules*, of the Times and Rates of
Performance of the Passage from *Bombay* to *Suez* and back

DEPARTURE FROM		ARRIVED AT		Distance in Mues.	Time Steaming	Average Rate per Hour	AT ANCHOR AT		Total Time on the Passage	REMARKS
PLACE.	TIME WHEN.	PLACE.	TIME WHEN				PLACE	TIME.		
Bombay	20 March 5 P.M.	Aden	31 March 1 P.M.	1,641	10 20	6 2	Aden	5 20	—	Light westerly against us throughout
Aden	6 April 9 A.M.	Mocha	7 April 9 A.M.	150	—	6 2	Mocha	— 20	—	For the most part light airs till near Mocha.
Mocha	8 April 5.35 A.M.	Juddah	12 April 6 P.M.	717	4 12½	4 6	Juddah	4 13	—	Two days north wester against us.
Juddah	17 April 7 A.M.	Suez	22 April 8 A.M.	628	5 1	5 1	—	—	—	Three days hard north-wester against us
Total from Bombay to Suez ..										
				2,936	21 0½	5 5		11 5½	32 15	
Suez	26 April 5 P.M.	Cosseir	28 April 8 A.M.	278	1 15	7 1	Suez	4 9	—	Favourable winds and weather.
Cosseir	30 April 6 P.M.	Juddah	3 May 3 P.M.	406	2 21	5 7	Cosseir	2 10	—	The last day a heavy north-wester, which occasioned a slight detention in making the port
Juddah	6 May 7 A.M.	Mocha	9 May 11 P.M.	517	3 16	5 7	Juddah	2 16	—	Favourable weather.
Mocha	12 May 9 A.M.	Aden	13 May 11 A.M.	150	1 2	5 6	Mocha	2 10	—	Ditto ditto.
Aden	19 May 5 A.M.	Bombay	29 May 6 P.M.	1,641	10 12½	6 4	Aden	5 18	—	Winds favourable throughout.
GRAND TOTAL ..										
				24,992	19 18	6 2		17 15	37 9	
				50,238	41 3½	5 7		—	70 —	

True Copies

(Signed)

CHARLES MALCOLM,
Superintendent

(Signed)

J H WILSON,
Acting Commander.

(31.)—LETTER from Sir C. MALCOLM, Superintendent of the *Indian Navy*, to the *Bombay Government*, dated 23d August 1830.

Honourable Sirs:

IN reference to the last paragraph of Mr. Secretary Willoughby's letter, under date the 9th June last, requesting my opinion upon the whole subject of steam communication, in reply, I have the honour to state that I have been thus long delayed in answering this order, as I felt that I could not do justice to so important a subject without the fullest inquiries to ascertain, with all the correctness possible, the state of the winds, weather, and currents throughout the whole year between this and Suez, as well as the various ports which lay in that track, with their capabilities of being used during the various seasons of the year with most advantage to steam navigation.

2. With regard to the class of vessels best fitted for this service I have already fully stated my opinion in my letter of the 12th November 1829, and I continue to think that no class of steamer will be found better adapted to the proposed service, provided they can carry from twelve to fifteen days' coal; with less many difficulties will constantly occur, as has been already stated by Captain Wilson in his letter to Mr. Secretary Auber of the 22d of April last.

3. It being also of much importance that the establishment of these vessels should be on as reduced a scale as possible, to enable them to carry the greatest number of passengers, I would suggest it to be as below.* This establishment would in my opinion render them perfectly efficient for the duties of the packets, and when required for the purpose of war they would have an increased complement.

4. To keep up the communication from hence by steam with Suez four steamers will be required, three of them only manned as one is supposed to be constantly under repair. The principal difficulty is the distance of the first station from Bombay to the Red Sea. In the S. W. monsoon from the 15th of May until the 20th of August I conceive no steam vessel can go to the Red Sea, but I consider that with the experience of a few voyages, which will show the best stations for our coal depôts, vessels might return at all seasons, even when the N. E. monsoon is at its greatest height, by having depôts far enough to the northward. Commander Wilson, of the Honourable Company's steamer *Hugh Lindsay*, conceives *Manilla* near enough on his return (1,397 miles to Bombay) to take his final departure from in the N. E. monsoon. I doubt this; but should we find it too far we can have a depôt either at *Cape Isolette*, where there is a good harbour, only 870 miles from Bombay, or at *Zoor*, 776 miles (near *Rassalgate*) where the chief is our friend. It may be useful here to remark that during the N. E. monsoon the weather all along the eastern coast of Arabia is very favourable to steam navigation, being moderate with frequent calms.

5. A good steam vessel leaving Bombay during the N. E. monsoon, which could carry twelve days' coal, would I think make certain of reaching *Mocha*, but if that should be found upon experience to be too great a distance (1,780 miles) there is *Manilla*, or a depôt might be formed, if necessary, on the south side of *Socotra* (which is only 1,200 miles), with a fair wind; but it is evident the fewer depôts the more rapid the passage will be and less the expense.

6. There seems to be doubts of the practicability, at all times during the N. E. monsoon,

* Commander	..	..	..	..	1	Stokers	..	..	..	8
Master	..	..	..	..	1	Coal Trimmers	..	..	..	4
Purser	..	..	..	..	1	Seamen	..	..	..	6
Midshipmen	..	..	..	..	2	Lancars	..	..	..	6
Doctor	..	..	..	..	1	Servants	..	..	..	6
Engineers	..	..	..	..	2					—
Assistant Engineer	..	..	..	..	1					41
Armourer	..	..	..	..	1					—
Carpenter	..	..	..	..	1					

APPENDIX,
No 25.

continued.

Steam
Communication
with India,
and on the Rivers
of India

APPENDIX,
No. 25.

continued

(31) Letter from
the Superintendent
of the
Bombay Marine,
23d Aug. 1830

soon, of getting the coals off from Mocha, as strong winds often blow right into the roadstead, and create a very considerable and unpleasant swell: a hulk has been proposed; still the officers who have been frequently there say that there is no part of the anchorage where she could be moored, or where the steamer could be anchored, that is free enough from swell during those gales to allow of laden boats lying alongside of either, particularly the steamer, with safety. The remedy would be a shed on the island of Perim, or Babelmandel, in the harbour of that name, which is landlocked, and accessible at all times and seasons; as it is uninhabited, it would be necessary to get the Sultan of Senna to keep a guard there, which would be both cheaper and better than keeping a guard of our own in such a hot desolate place. In short, I see no difficulties that cannot easily be overcome by a short experience of the capacity of the vessels employed and the winds and seas they encounter.

7. Explanatory of the last paragraph I have enclosed a synopsis of the winds, weather, currents, &c. &c. between this and Suez, which has been drawn up by the master of the *Palinurus*, under the correction of Commander Moreshby of that ship, and has been examined by all the officers who possess local knowledge of those seas. I have also annexed a statement of the different distances, and a chart containing the coast of Arabia from Cape Isolette to the island of Perim with the island of Socotra.

8. The number of vessels required would of course depend upon the communication that is to be kept up. The expense of each vessel for the trip (of three months) amounting to about twenty-three thousand rupees, a sum which in my opinion would be defrayed by passengers and letters.

9. In order to keep the machinery of these vessels in a perfect state, as well as to render them immediate repairs when required, I think it would be absolutely necessary (as well as a saving to Government) to have an efficient officer with a knowledge of the construction and repairs of marine engines as inspector of steam vessels; this officer would also have charge of the dock steam engine, the superintendence of which (by two of the Mint mechanics) costs the Government four hundred rupees per mensem, a sum that would nearly defray the extra expense of the situation suggested.

10. I would also beg leave to suggest that the supply of coals should be the *Llongennuh* coal, and that it should be annually deposited at Mocha or Perim, whichever may be the head station, direct from Europe. The vessels leaving Europe from February till May would enable ships coming to this Presidency to take the coals at a very reasonable freight, as in being able to leave the Red Sea from June to September, they would have a quick passage to this port, and the coals might be conveyed by country craft from either of these ports to Suez or Cosseir.

11. I find, also, that efficient and intelligent engineers could be engaged, through the medium of a respectable mercantile house at this Presidency, at a much more moderate rate than those now employed, which under the present system forms a very heavy item in the expense of steam navigation; besides, those men who have been sent, as well as those from Calcutta who draw such high wages, have been troublesome men, taking every advantage of our being dependent upon them, and it is of great consequence to render us as soon as possible independent of their insolence and caprice.

12. In order that your Honourable Board may have a comprehensive view of the case, I have herewith annexed a statement of the actual expense of one of those vessels, allowing for her consumption of coal for a voyage to Suez and back, with her other expenses for a period of three months; also an estimate of the building and equipment of one vessel of the class suggested, with the expense of her engines, founded upon creditable data.

Superintendent's Office,
Bombay, 23d August 1830.

I have, &c.

(Signed)

CHARLES MALCOLM,
Superintendent.

SYNOPSIS of the WINDS, WEATHER, CURRENTS, &c between Bombay and Suez, throughout the Year.

II.—FINANCE.—COMMERCIAL.

1017

II. FINANCE.
Commercial

APPENDIX,
No. 25.

continued
Steam
Communication
with India,
and on the Rivers
of India

(continued..)

MONTH	Winds and Weather. 1° off Bombay, from thence to Mocha.	Winds and Weather between Mocha and Cosseir.	Winds and Weather between Cosseir and Suez	Currents between Bombay and the Red Sea.	Currents in the Red Sea.	REMARKS
JANUARY	Pleasant land and sea breezes, extending 50 or 60 miles off shore, when N. E. winds to N. N. W. may be experienced from thence to the Straits of Babelmandel, moderate breezes from the N. E. when a southerly wind is experienced.	From Mocha to the 19th degree of latitude the winds are strong from the South, from thence to Cosseir frequent fresh northerly westers and moderate southerly winds for two or three days. Fine pleasant weather.	Strong winds from N. W. and N. N. W. interrupted by occasional breezes from the southward lasting two or three days.	Approaching Socotra the current sets S. W. running more to the westward on nearing the Straits of Babelmandel.	Generally setting to the southward, when N. W. winds prevail.	In Mocha Roads the fresh southerly winds cause a very high sea, which renders communication with the shore difficult. In Aden, Back Bay, Jiddah, and Suez, fine weather and smooth water may be experienced. In crossing from India to the Red Sea a long swell may be expected from N. E.
FEBRUARY	Land and sea breezes generally as in January, but occasionally moderate north westers blowing home to the Malabar coast as far as the Strait of Babelmandel; fine strong breezes from the E. N. E. and N. E.; then the southerly winds prevail. Fine pleasant weather.	Strong N. W. and light southerly winds.	Same as in January.	Same as in January.	Same as in January.	Same as in January.
MARCH	Land and sea breezes less regular than in February. Moderate breezes from the N. W. more prevalent. From Bombay to Mocha winds not so strong as in February; swell still continues.	Wind north-westerly, as strong as in February; little or no southerly wind.	Same as in January, with the exception of southerly winds being less frequent in the sea of Suez.	Same as in January.	Same as in January.	Same as in January.
APRIL	Variable weather, with moderate winds from N. W. to W. and occasional intervals of land and sea breezes; from thence to Mocha weather occasionally unsettled, winds extremely variable and blowing occasionally from every point. On the Arabian Shores N. E. and easterly winds prevail as far as the Straits, then southerly winds	Southerly winds, seldom extending beyond Gebel Foo, while N. W. winds become more frequent between Juddah and Cosseir.	Same as in March.	Current begins to incline to the N. E. near Socotra.	Same as in January.	Same as in January, but no swell.

APPENDIX,
No. 25.

continued

31) Letter from
Superintendent
of the
Bombay Marine,
23d Aug 1830

MONTH.	Winds and Weather, off Bombay, from thence to Mocha	Winds and Weather between Mocha and Coaseir.	Winds and Weather between Coaseir and Suez	Currents between Bombay and the Red Sea	Remarks
MAY	Cloudy unsettled weather, with breezes from west to N. W. towards the latter, and occasional squalls from the southward, from thence to Mocha westerly winds prevailing; near the Arabian shore more southerly. In the vicinity of Socotra variable winds prevail	Winds variable, north-westerns occurring more frequent between Mocha and Coaseir, Jeddah and Coaseir north-western winds most prevalent.	Wind strong from N. W. and N. N. W. interrupted occasionally by squalls from the S. E. of no long duration.	Between Socotra and the Arabian coast current sets to the northward and eastward	In Mocha Roads winds variable, and strong from southward occasionally; at other times strong from the northward, causing a confused swell, with intervals of land and sea breezes. In Coaseir the wind blows at times strongly from the N. W. causing a constant swell, from the exposed state of the anchorage. Crossing from India little or no swell will be met with
JUNE	Squally from the N. W. and S. W. with heavy rain and cloudy weather, the monsoon generally commencing between the 6th and 16th; from thence to Mocha fresh gales from the W. S. W. and S. W. extending to the meridian of Guardafui; from thence moderate westerly winds prevail to the Straits, where light north-westerly airs are met with.	Near Mocha, land and sea breezes in the early part of the month, occasionally north-westerns, with rain. Between Jeddah and Coaseir north-westerns prevail.	Same as in May	Near Socotra current sets strong to the eastward, and on the Bombay Bank when the monsoon has set in a northerly current will be experienced.	Light northerly winds and sultry weather in Mocha Roads; at Jeddah land and sea breezes when the north-westerns are not blowing. A very high sea would be experienced in crossing from India, especially near Socotra.
JULY	Off Bombay, strong westerly winds and squally; beyond, strong gales from the W. S. W. and S. W. extending to the meridian of Guardafui; from thence westerly winds of moderate strength prevail as far as Babelmandel, when light north-westerly airs are met with.	North-westerly winds prevailing occasionally, strong southerly winds seldom blowing and of short duration.	North-westerly winds prevalent and blowing with great violence	On the Bombay Bank a southerly set is experienced, between the Arabian coast and Socotra are strong and variable, shift suddenly and run 50 or 60 miles per day	At Mocha land and sea breezes prevail when the weather is settled. Crossing from the Red Sea a high sea would be experienced.
AUGUST	Moderate breeze and cloudy, squalls less frequent near Bombay. Between Bombay and Mocha the same as in July with the exception of the wind being more moderate	Near Mocha variable winds, towards Coaseir northwestern winds generally met with	Same as in July.	On the Bombay Bank the current between the Arabian coast and Socotra sets to the northward and N. E.	At Mocha the winds and weather the same as in July, and at Coaseir and Suez north-westerns still prevailing; at Jeddah fine pleasant weather, occasionally interrupted by north-westerns. Crossing from India a high sea may be expected, especially at the mouth of the Aden Gulf

II.—FINANCE.—COMMERCIAL.

1019

II. FINANCE.
Commercial.

APPENDIX,
No. 25.

continued.

Steam
Communication
with India,
and on the Rivers
of India

SEPTEMBER	Winds, variable from the west-ward, sometimes light airs from N. E. near Bombay. From Bombay to Mocha for the most part westerly, with occasional squalls from the W. S. W. and N. W.	Variable winds with occasional breezes from the N. W. lasting many days.	Weather more variable than in July.	Variable	Same as in July.	At Mocha light southerly winds prevail with sultry oppressive weather and smooth water; crossing from India, in the early part, a westerly swell will be met with; little or no sea at the latter part of the month.
OCTOBER	N. E. winds attend about 40 or 50 miles from the coast of India, when the E. N. E. winds are prevalent from thence to Mocha moderate winds from N. E. extending as far as the Arabian coast, when it changes to E. S. E. and S. E.; at the entrance of the Straits a south wind will be met and unsettled weather.	Southerly winds now set in near Mocha, and at times near Cosseir, at the latter place north-westerly still prevail, at times strong and lasting several days.	Moderate from the northward; weather unsettled.	Variable.	Same as in July.	Crossing from India no sea will be encountered; at Mocha light winds and sultry weather.
NOVEMBER	North-westerly winds prevalent off the coast of India, from thence to Mocha E. N. E. and N. E. winds will be experienced. At the entrance of the Straits a southerly or southerly wind will be experienced, with unsettled hazy weather.	Southerly winds prevail near Mocha, and very frequently, at Cosseir, though light at the latter place; north-westerly likewise prevalent at Cosseir, sometimes strong.	Same as in October	Approaching the Red Sea the current now sets S. W. and W	Same as in July.	Southerly winds now set in at Mocha, and more frequently at Juddah, Cosseir, and Suez. In crossing from India no sea will be experienced.
DECEMBER	Land and sea breezes extend about 50 miles, when N. E. to N. N. W. winds may be experienced, the N. E. monsoon now being set in; from thence to Mocha, the same as in January	From Mocha, to the 18th of latitude, southerly winds prevail, and are more frequent in the northern parts of the sea of Suez, lasting from two to five days, sometimes blowing fresh above that degree.	Variable and unsettled	Same as in November, the westerly current near the Red Sea increasing in strength	Same as in July.	Fresh southerly winds, with a heavy swell in Mocha Roads; pleasant cold weather at Cosseir and Suez. Crossing from India little sea will be encountered.

(Signed)

J. P. SANDERS,

Master

SCALE of the DISTANCES between the different Stations for COALS.

(31) Letter from
Superintendent
of the
Bombay Marine,
23d August 1833.

FROM	TO	Distances in Miles.
GRAND DEPÔTS.		
Bombay	Mocha <i>viâ</i> Babelmandel	1,780 miles.
Mocha	Cosseir	915 —
Cosseir	Suez and back again to Cosseir	502 —
MINOR DEPÔTS :		
Bombay	Maculla	1,397 miles.
Maculla	Mocha <i>viâ</i> Babelmandel	405 —
Mocha	Juddah	539 —
Juddah	Cosseir	387 —
STATIONS PROPOSED, BUT NOT ADOPTED.		
Bombay	Perim	1,740 miles
Bombay	Curia Muria	1,008 —
Curia Muria	Mocha <i>viâ</i> Babelmandel	842 —
Bombay	Cape Isolette or Madraka	867 —
Cape Isolette or Madraka	Mocha <i>viâ</i> Babelmandel	970 —
Bombay	N. E. Harbour in Socotra	1,148 —
Bombay	N. W. ditto in Socotra	1,202 —
N. E. Harbour in Socotra	Mocha <i>viâ</i> Babelmandel	691 —
N. W. ditto in Socotra	Mocha <i>viâ</i> Babelmandel	632 —
Bombay	Zoor	776 —
Zoor	Mocha <i>viâ</i> Babelmandel	1,184 —

(Signed) CHARLES MALCOLM,
Superintendent.

ESTIMATE of the proposed Establishment for a STEAMER of 270 Tons, with her Daily Consumption of COALS for Forty-one Days, to Suez and back to Bombay, and her other Expenses for a period of three Months.

	Pay per Month.	Total of Three Months' Pay.	Cost of Provision in Kind per Month.	Total of Three Months' Provision
	Rs.	Rs.	Rs.	Rs.
1 Commander	600 0 0	1,800 0 0	—	
1 Master	110 } 135	405 0 0	—	
Table Allowance	25			
1 Purser	220 0 0	660 0 0	—	
2 Midshipmen each	50 0 0	300 0 0	19 2 0	117 0 0
1 Assistant Surgeon, per day 4 Rs. ..	120 } 204	612 0 0	—	
Military Pay	84			
2 Engineers each	200 0 0	1,200 0 0	19 2 0	117 0 0
1 Assistant Engineer	50 0 0	150 0 0	19 2 0	58 2 0
1 Armourer	50 0 0	150 0 0	19 2 0	58 2 0
1 Carpenter	50 0 0	150 0 0	19 2 0	58 2 0
8 Stokers each	23 0 0	552 0 0	19 2 0	468 0 0
6 Able Seamen	22 0 0	396 0 0	19 2 0	351 0 0
4 Coal Trimmers	10 0 0	120 0 0	6 0 0	72 0 0
6 Lascars	8 0 0	144 0 0	6 0 0	108 0 0
4 Servants	15 0 0	180 0 0	6 0 0	72 0 0
2 Ditto	10 0 0	60 0 0	6 0 0	36 0 0
Provision Amount		6,879 0 0		1,516 2 0
		1,516 2 0		
		8,395 2 0		
Total of 41 days' Coal at 10 tons per day, at } 33 rupees per ton		13,530 0 0		
		21,925 2 0		
Wear and tear for three months		1,200 0 0		
Rupees		23,125 2 0		

BUILDER'S ESTIMATE.

Of the Hull, Masts, and Spars of a Steamer of 270 Tons, Iron-fastened, is ..	Rs. 96,000
Engine of 100-horse power complete, landed in Bombay	48,000
Completing fit on board	2,000
Stores required for the vessel	8,000

Rupees 1,54,000

APPENDIX,
No. 25.

continued.

(32.) Letter from
the Bombay
Government to
the Court
of Directors;
25th July 1831

(32.)—LETTER from the *Bombay Government* to the Court of Directors (Marine Department), dated July 25th 1831.

Honourable Sirs:

We have the honour of transmitting to your Honourable Court the accompanying copy of a Minute recorded by our Right Honourable the President on the subject of steam navigation, and to inform your Honourable Court that his Lordship's propositions have met with our concurrence, and the necessary measures will be taken for dispatching the *Hugh Lindsay* to the Red Sea by the 1st of January next.

We have, &c. &c.

(Signed)

JOHN ROMER.

W. NEWNHAM.

JAMES SUTHERLAND.

(33.) Minute
of Governor of
Bombay;
14th July 1831.

(33.)—MINUTE of Earl CLARE, Governor of *Bombay*, subscribed to by the Board, dated 14th July 1831.

It would not be, I think, advisable to keep up the *Hugh Lindsay* steamer as a vessel of war, and the number of officers and men which she will require for her voyages to the Red Sea and back should be left to the Superintendent of the Indian navy to settle and report to Government, bearing in mind the necessity of reducing the expense of the steam vessel as low as possible, without any injury to her efficiency. I do not think it would be at present desirable, as we are ignorant of the intention of the Court of Directors, to have a complement of officers sent on board the *Hugh Lindsay* with a view of training them in that vessel to a knowledge of managing steam vessels. In the first place the fewer officers and men the *Hugh Lindsay* has the better, for she has but little accommodation; and if as I hope the Court shall decide hereafter to have a regular communication between this country and Europe by means of steam vessels, I have no doubt of our being able to select from the Indian navy as many experienced officers as we shall require for that important branch of the service; in the mean time it will be sufficient to keep only such a complement of officers and men on board the *Hugh Lindsay* as will enable her to make her passage with safety and expedition.

I propose that the Superintendent of the Indian navy shall be directed to have the *Hugh Lindsay* ready to leave Bombay for Suez on the 1st day of January 1832, and that she remain at Suez until the 10th day of February next, when she will start on her return to the Presidency; and I will state to the Board my reason for fixing those dates, and proceed to make a few observations, the result of my experience of the nature of the voyage from the Red Sea to Bombay during the winter months.

One of the great objects of a communication by steam with Europe is to receive early intelligence of the orders of the Court of Directors, and to send in return the answers of Government. It is notorious that vessels which leave England for India in November and December, rarely, if ever, reach their destination before the month of May, whereas the despatches which will I hope be forwarded by the Malta steam packet in December, will reach Alexandria before the end of January. The Consul-general will without delay forward them to Suez, and thus we shall receive them, as well as the latest news from Europe, by the second week in March, full two months earlier than we could in any way expect them if sent round the Cape. I wrote long since to the Court and Board to inform them of my intentions, and I trust the arrangement will be satisfactory to my colleagues. I conceive that the 1st of January will be as good a time as any other for passengers proceeding from India overland to Europe, and we may probably receive answers to our despatches by the *Hugh Lindsay* by the last March China ship; but as there is one link unfortunately wanting in the chain, a communication by a steam

a steam packet between Alexandria and Malta, that must be necessarily an uncertain event.

The difficulty of getting out of the Red Sea very often during, and always after, the month of December for the three first months of the year is considerable, as strong south winds prevail constantly in the months of January, February, and March. The worst month in the year for a voyage down the Red Sea is the month of January; afterwards there is generally, during the Spring, a calm of a short duration, at which time a powerful steam vessel, like the *Hugh Lindsay*, by watching her opportunity, may make a good passage. From Suez to Juddah the north-west wind generally at that season prevails, and the steamer experiences but little interruption. From Juddah the difficulties increase, but, as I well know, they are not insurmountable. From Juddah the reefs extend southward as far as Hodeida, and with the assistance of the chart made by Captain Elivon, and having a pilot on board, the steamer, in the event of a prevalence of strong southerly winds, might either go in smooth water within the reefs, anchoring every night, or if the wind, though adverse, was moderate, she might beat down the sea against it; and below Hodeida about twelve miles south there is as fine shelter as is to be found in any bay in the world, at Ras Mazammel Bay. From this bay to Mocha is not above eighty miles, where again is excellent shelter, and as the Board knows Mocha is within forty miles of the Straits of Babelmandel; so that, with the experience already gained, with smooth water within the reefs, and these harbours to run into, in case of bad weather without, I have no doubt of a steam vessel with the powers of the *Hugh Lindsay* making her passage with safety and expedition, even at the most unfavourable season of the year for getting out of the Red Sea. I have dwelt upon this part of the subject at some length because I am aware that an unfavourable impression may be conveyed as to the possibility of a certain return from the Red Sea by any steamer during the winter months, in consequence of the last unfortunate voyage to Bombay of the *Hugh Lindsay*, but I have already stated to the Board that the delay in my arrival at Bombay solely arose from a want of a proper supply of coals.

The superintendent of the Indian navy should be desired to take measures to send a supply of coals to the Arabian coast and to the Red Sea for the next voyage of the *Hugh Lindsay* at the opening of the ensuing fair season, and as the *Benares* will at that time leave this Presidency on her return, probably the vessels containing the coal might be placed under the orders of Captain Elivon, and the superintendent should ascertain whether any and what part of the coal was purchased from a private merchant at Mocha last winter for the use of Government, and he should report what quantity of coal is now at Maculla and Juddah (I believe eighty tons at the former and thirty at the latter port), and what quantity he proposes sending, and to what ports, for the next voyage of the *Hugh Lindsay*.

I am led to hope that having given due notice in this country of the intended voyage of the *Hugh Lindsay*, and of the period of her return, and having done my best to let the same be known in England, that great numbers of letters will be sent by her, which, with her passengers, will defray a considerable part of the expense of the voyage. The object however of a ready and quick communication with Europe is one of so great importance, particularly at the present time, I must consider the expense of the voyage a matter of minor consideration; I feel it, however, to be my duty to do every thing in my power to reduce it as much as possible. That expense, at least in the article of fuel, would be considerably lessened if the supply of coal required was sent direct from England to Maculla, from which port the quantity required might be sent without difficulty, and at little cost, in the bungalows of the country to the different ports in the Red Sea, and I certainly wish to call the attention of the Court of Directors to this subject in the event of their deciding to send out more steam vessels to this country. I should inform the Board, that finding the acting agent of the Company at Juddah in every respect an improper person to be employed, I look upon myself to appoint an Armenian merchant, by name Allim Yusef, in his place, of which I hope my colleagues will approve, and I have every reason to believe he will be supported by the Governor and other Turkish authorities of the

APPENDIX,
No. 25.

continued.

Steam
Communication
with India,
and on the Rivers
of India

APPENDIX,
No. 25.
continued.

(33) Minute
of the Governor of
Bombay;
14th July 1831.

the place. We have not I believe any agent either at Cosseir or Suez; at both places, particularly the latter place, an accredited agent is really necessary, and before the next voyage of the *Hugh Lindsay* I propose appointing one; but before I do so I wish the secretary to let me know what is the amount of pay of the agent at Mocha, the only paid agent I believe of the Company in the Red Sea. Perhaps until the communication becomes more frequent, it may for the present be sufficient to pay the several agents for their trouble each time the steam vessel touches at the different ports, and this mode of remuneration will be I think more economical than a fixed salary, and, together with the consideration which being agent to the Company gives to the individual who holds the situation, it will probably be sufficient for all the duties imposed upon him; but I am clearly of opinion that we should have accredited agents at Suez, Cosseir, Juddah, and Mocha, and if the Court decides to make Maculla a depôt for coals, an agent there will be also wanted.

Dapoorie, 14th July 1831.

(Signed) CLARE.

(34) Letter from
Secret Committee
of the Court
of Directors to
Bombay
Government;
18th June 1831

(34.)—LETTER from the Secret Committee of the Court of Directors to the Governor in Council at *Bombay*, dated the 18th June 1831.

WE transmit to you for your information and guidance, copy of a letter which, on the 14th March last, we addressed to the Governor-general in Council, on the communication with India by the route of the Persian Gulf and the Red Sea.

Our wish and direction is, that you should inquire into the subject, and submit a minute report of the result of those inquiries to the Governor-general in Council, with the least practicable delay, transmitting to us at the same time a copy of such report for our information.

As it may be desirable that you should enter into communication with Mr. Farren, His Majesty's Consul-general for Syria, we shall transmit to him a copy of this despatch, in order that he may supply you with any additional information which he may obtain on his arrival at Damascus.

(35) Extract
Letter from
Secret Committee
to Bengal
Government;
14th March 1831.

(35.)—EXTRACT LETTER from the Secret Committee of the Court of Directors to the Governor-general in Council at *Bengal*, dated 14th March 1831.

WE transmit to you for your information copy of a letter which we have received from the Right Honourable Charles Grant, President of the Board of Commissioners for the Affairs of India, dated the 1st February last, together with its several enclosures, from Captain Chesney of the Royal Artillery and Mr. Farren the Consul-general for Syria.

Our object in transmitting these papers to you is to put you in possession of the opinion of these individuals, in regard to the communication with India by the route of the Red Sea and the Persian Gulf.

(36) Extract
Letter from the
Right Hon
Charles Grant
to the
Secret Committee,
1st Feb 1831

(36.)—EXTRACT LETTER from the Right Hon. CHARLES GRANT to the Secret Committee of the Court of Directors, dated the 1st February 1831.

I HAVE the pleasure to enclose for your information copies of papers relating to the communication with India by the route of the Red Sea and the Persian Gulf.

The first is by Captain Chesney of the Royal Artillery, and enters into an examination of the difficulties in the way of a communication with India by way of the Red Sea.

The

The other of these papers is by Mr. Farren, His Majesty's Consul-general for Syria, whom I have long known, and who is, I believe, perfectly competent from his local knowledge to speak on the points to which he adverts, as it respects the advantage of communicating with India by the route of Damascus, Bussora, and the Persian Gulf.

APPENDIX,
No. 25.
continued.

(37.)—EXTRACT LETTER from Capt. F. R. CHEENEY, of the Royal Artillery, to the Right Hon. Sir ROBERT GORDON, G. C. B., His Majesty's Ambassador to the Ottoman Porte, dated Jaffa, 2d September 1830.

(37.) Extract
Letter from Capt
F R Cheenev
to the British
Ambassador to the
Ottoman Porte .
2d Sept 1830.

Sir:

I HAVE realized the intention communicated to your Excellency in my letter from Cairo, dated 7th June, of visiting Suez, Lake Menzaleh, &c. and also sailing down the Red Sea to Cosseir, from whence I crossed the desert to the Nile; endeavouring to ascertain during these journeys what impediments and facilities exist with regard to a steam communication with India by one of these routes.

It is with some degree of hesitation that I venture to touch upon a subject so foreign to my profession, and attended with some difficulties, but steam navigation is undoubtedly less complicated than that of sailing vessels, and its extension to more distant countries has long interested me; indeed so much as ten years ago I made some calculations as to the feasibility of the communication with India through Egypt and the Mediterranean, leaving the mails at Gibraltar, Malta, and perhaps Cape Matapan (for Greece, &c.), and although I did not bring the subject forward, the consideration of the question naturally prepared my mind for the local examination just completed; the result of which I shall proceed to give, trusting that your Excellency will bear in mind that I am not a nautical man, and therefore have a claim to allowances for any errors which may arise from this cause, particularly as I hope they will not be so serious as to mislead any one in considering the grand question itself.

The Red Sea offers serious difficulties to the navigation of sailing vessels; its western side is shallow (owing to coral rocks), and when the wind is not so favourable as to permit their keeping the Arabian shore on board, they are naturally exposed to much danger on the Egyptian side. During five months, beginning from the middle of May, the wind blows steadily and moderately down the Red Sea; during all this period vessels must beat up the Red Sea as far as they have to go; and as the Arabian navigators neither know the use of the compass or the bearing of the stars, they invariably come to every night, consequently the voyages towards Suez would be exceedingly long if they were undertaken at this season of the year, when all navigation may be said to cease; for, if there be not the supposed time for the vessel to reach her destination early in May, she waits until the Autumn, when southerly winds give a speedy passage, and, with a fair wind, a safe one, through the deep water on the Asiatic side, where there is a space sufficiently broad and free from all obstructions.

It is evident that the foregoing difficulties do not apply to steam vessels, which can make a straight course at all times, and which could ascend the Red Sea against the moderate winds prevailing there, at the rate of six or seven knots per hour, when she is not impeded; for I apprehend that a violent gale of wind is a rare occurrence in that sea, and that the sequel would prove that a steam vessel (of moderate power) can ascend with much rapidity even at the most unfavourable moments; so that there remains but one serious difficulty—the coals—which could be overcome by forming a depôt at Mocha, Aden, or some other place in the straits of Babelmandel, to which they could be transported in many ways: for instance, by Lake Menzaleh, and across the Isthmus on camels to Suez; or up the Nile to Kenne and across to Cosseir, on camels at a contracted rate of about eight or ten piastres for nine or ten cwt., and still cheaper were an establishment

APPENDIX,
No. 25.

continued.

(37.) Extract
Letter from Capt.
F. R. Chesney
to the British
Ambassador to the
Ottoman Porte;
2d Sept 1830

ment of those animals to be kept for this purpose, as the Pacha does, allowing only four piastres for each journey to the Arabs who feed, keep, and conduct the animal. The transport up the Nile is known to be exceedingly moderate, so would the subsequent part be from Cosseir to Mocha; and in this way the depôt could speedily be formed at a moderate expense, unless it should prove still less to send the coals thither altogether by sea.

The necessary fuel, whether coals, charcoal, oil, or wood, being placed near the Straits of Babelmandel, the next question is, how high in the Red Sea it would be most advisable that the steamer should ascend? Cosseir offers one route; the port is an open one, but perfectly safe, with sufficient water within 300 yards of the shore, and even within 100 or less in some places, and from this place a Tartar on a dromedary can reach Alexandria in the course of ten days, going through the Desert in a diagonal line all the way to Cairo (leaving the Nile at some distance on his left), and thence direct to Alexandria. Admitting that this is not an extreme case rather than a practicable one, it is evident that it can only apply to despatches; and that the officer carrying them, and passengers, would either take much more time, or choose the easier route of crossing to Kenné, and descending the Nile, which would either separate the passengers, parcels, &c. from the mail and despatches, or involve the delay of the latter at Alexandria until the former could arrive; for which reason, if the port of Cosseir were to be ultimately decided upon, it would be decidedly advisable to make the communication by the Nile (as far at least as Cairo) and endeavour to give every facility as to time which this route is capable of.

Four dollars and a-half only were asked for eleven camels, with their attendants, to take me from Cosseir to Kenné; three days and four nights were employed in this journey, fifty hours of which were consumed in actual travelling; the camels being rather heavily laden made but about three miles and a-half per hour, owing partly to the heat from 100° to 112°, the last three days of June.

But with one station, and a relay of camels, placed in a valley midway, occupied by the Ababdi Arabs preparing charcoal, and where there is water, the journey from Cosseir to the Nile (with animals moderately laden) need not exceed thirty-two or thirty-six hours, including a short rest at changing; and supposing a boat to be quite ready, either at Kenné or Coptos (which is rather nearer the Red Sea) and to go down the Nile day and night, as mine did, for the sake of a present (against a contrary wind all the time), she would, at the same rate, reach Cairo in four days, and less than four (a Tartar takes thirty-six hours) would carry the party to Alexandria, making in all nine days, or nine days and a-half, from Cosseir, and twelve in cases of some unforeseen delay.

Even these periods might be materially shortened by the use of a river-going steamer, such as those on the Clyde, some of which draw but eighteen inches water, and one a good deal deeper (two feet and a-half or three feet) could ascend and descend the Nile at all times to Rosetta, which is only six hours by the Desert from Alexandria; from Kenné to Rosetta is about 380 miles, and a vessel going eight knots would accomplish this upwards against the stream of two knots and a-half in seventy hours, and downwards with the current in forty-two, making fifty, including eight to go from Rosetta to Alexandria; so that the whole journey from Cosseir would be performed in eighty-six or ninety hours; and that from Alexandria to Cosseir in 114 or 116, with very little fatigue and no real difficulty; and with contracts and the necessary arrangements about coals, &c. the expense of the whole would be sufficiently moderate.

The next route that presents itself is that by Suez, which port the steamer would reach in about twenty-five hours more than she requires to go to Cosseir; there is safe anchorage and shelter within five miles of the town, and she cannot go higher until the sand is removed which chokes the passage up to the town where there is but a depth of seven or eight feet water only.

The subsequent difficulties in crossing the Isthmus and embarking are greater than those attending

attending the port of Alexandria, but were they once overcome the route of Suez would be still quicker; before, however, I enter more into its details, it will be necessary to endeavour to describe the situation of Damietta and the adjacent coast, with the impediments in embarking, &c.

Damietta is on the right bank of the eastern branch of the Nile, and about eight miles from its mouth, where there is a bar of about 150 yards long, having rather less than four feet water when the stream is at the lowest, and seven feet and a-half when at the highest; formed by the deposit of the river from time immemorial, without any efforts to remove this serious impediment, which obliges all vessels to take in and discharge their cargoes outside of the river, where they anchor in moderately safe ground, the goods being transported in *germs* (a sort of lighter) which passes constantly to and from Damietta, the rest of the river inside the bar being sufficiently deep. In bad weather the vessels run from the river's mouth to a bay formed by a point of land north-east of the Nile, distant about four miles; this anchorage, called *Tachtarass* in Arabic, and *Caubroo* in Italian, gives sufficient water for large vessels between a mile and a-half and three miles from the shore, where there is a considerable space, and smooth water for boats to communicate with the shore. It is exposed to the north-east, but vessels are considered safe at single anchor; and as no accidents are remembered, or at least spoken of, it may be concluded to be really secure: it is about eight miles from Damietta by land, chiefly along Lake Menzaleh, from which a part of this bay is separated by a narrow stripe of land, and through which there is an opening into the lake for boats, called *Stano Souan*, four or five feet deep.

Running about E. S. E. from *Tachtarass*, is the narrow sandy stripe of land separating Lake Menzaleh from the sea, and through which are the passages *Stano Souan* (already mentioned) three miles from *Tachtarass*; that of *Bohaz Dibeh*, ten or twelve; the one of *Stano Genuleh*, about fifteen; and, finally, the ancient one of *Tineh*, twenty-five or thirty miles distant, now closed.

The lake begins about a mile and a-half from Damietta; it is an irregular parallelogram, nearly forty-three miles long (E.S.E. and W.N.W.), and varying from seventeen to twenty broad N. E. by S. W. from the sea to the land side; the bottom is a mixture of mud and sand, generally covered with weeds, but quite level, the depth seldom varying more than six or eight inches, being rarely much under four feet, and seldom materially above it, except where the sea enters; there are a number of small grassy uninhabited islands in the lake through which the fishing boats pass with facility in all directions; they are very numerous, of a construction at once broad and sharp, so as to give speed with little draught of water, and yet carry a good deal, some more than twenty tons, the smaller eight or ten. The fishermen live at the towns on the south-east border of the lake, viz. at *Menzaleh*, an hour from the lake, and on the canal from *Mansoma*; *Matariah* on the lake; *Saan*, two hours from the latter by a canal (joining them); and finally *Tineh*, a village constructed by the French (when they marched into Syria), it is a little eastward of the lake within 200 yards of the sea, with anchorage in good weather a couple of miles from the village; this is the nearest point to Suez, and would be the most convenient if the French cut into the lake were to be re-opened, as it is but two days and a-half, or thirty hours of pilgrim's travelling from that place.

The next shortest is that of *Saan*, now in use by the *Mecca* pilgrims: this village is two hours from the lake at *Matariah*, which it joins by a canal of three feet and a-half or four feet water; down and up this the boats pass at all times to fish. A line drawn from Damietta to Suez would pass over about thirty-five miles of lake to *Matariah*, and thence through *Saan* (propelled by poles against the bottom when the wind fails) to the latter; and three days (thirty-six hours travelling) thence to Suez; therefore, putting on one side the question of opening the bar at Damietta, there is the Bay of *Tachtarass*, where a steamer could await in safety, and supposing one station (giving one change of animals half-way through the Desert), the journey from Suez to *Saan* would be accomplished in twenty-four or twenty-eight hours at the most; and the subsequent part (by the lake) in a small steamer or fast-rowing boat, in eight or ten more, going not to Damietta but the

APPENDIX,
No. 25.

continued

(37) Extract
Letter from Capt
F. R. Cheaney
to the British
Ambassador to the
Ottoman Porte,
21 Sept. 1830

western extremity of the lake, and at once to the vessel by the passage of Stano Souan, making about fifty-six or sixty-two hours from the latitude of Cosseir to the supposed place of embarkation in Tachtarass, whereas that by the Nile to Alexandria requires eighty-six or ninety-six hours.

Suez would also have an additional advantage in the facility of supplying the necessary fuel; the Arabs of the Isthmus and those of Mount Sinai are easily dealt with, and would hail with joy any thing like constant employment; a party of them who accompanied us to Suez afterwards followed empty to Mount Sinai, to obtain one day's employment at a very moderate rate; and judging by those expenses, I have little doubt that coals could be transported across the Isthmus under ten piastres for each camel carrying eight or ten cwt. (at the present exchange less than 2s. 6d.); so that unless some intrigues should be used at Alexandria, fuel could be transported across Lake Menzaleh, the Desert, and finally to Mocha, at a very moderate rate, and that in sufficient quantity for the whole consumption; which will be much less than for the same distance of any other sea, simply because there is what may be called a trade-wind during a considerable portion of the year, down at one period and up at the other, making it well worth while to unship the paddles to sail the whole length of the Red Sea, going at the rate of eight or ten knots without steam, in a nice breeze and smooth water, not offering any serious impediment or delay when contrary. The Arab junk hired to go to Cosseir made that voyage from Suez, 300 or 320 miles, in four short days, thirty-seven hours in all, sailing.

In this view of the question there remains only one case where a difficulty might arise in the sequel, namely, if the roadstead of Tachtarass should prove less safe than I have ventured to state; but I believe it will be found sufficiently good to be adopted unless that of Alexandria be ultimately preferred to it, and also the other sources near Damietta; one or both of which would in all human probability be available, and become still more advantageous.

The first is the removal of the obstruction at Damietta Bar by means of machinery: it is not considered a very difficult task, and the merchants would join in the undertaking.

The second is the improvement of the Bohaz, or Stano Gemileh; also opening that of Tineh, so as to communicate with Suez by the latter place, avoiding Damietta altogether. The passage of Gemileh is at times resorted to by small Syrian vessels for shelter in bad weather; it opens about N. N. E., is nearly half a mile long and fifty yards wide: the least depth I found exceeded eleven feet; but as I was beset by the Arabs, and met some annoyance, I cannot be quite positive that this is the lowest point in the inlet, though I believe it to be so, and that nearly at all times of the year; for there is no fresh-water current to make a deposit, or the Bohaz must have been closed long ago. The land is low and sandy on each side of the entrance, and the surf moderate, owing to the opening lying towards the Syrian coast; once inside of the passage the lake is met six feet deep, afterwards less.

I feel a very strong conviction (from the nature of the soil) this opening could be readily enlarged by the use of machinery scraping the muddy bottom so as to admit a steamer, and that if once done it would long remain open; in addition to this operation, it is probable that it would be necessary to form a kind of small basin at the inside of the entrance, merely by driving a light range of piles, to keep out the deposits of the lake, and permit the vessel to remain afloat at all times: this place would then have two ways of communicating with Tineh, the one by sea, the other through the lake; and either would be accomplished with a fast boat in little more than three hours; so that from Suez to the steamer, or the reverse, would require but twenty-seven hours, or thirty at the outside.

In the other opening to the westward, called Dibeh (with a castle erected by the French for its defence) I found but five or six feet water throughout nearly a mile in length and 100 yards in breadth; it seems to be capable of much improvement, but at a far greater expense than that of Gemileh, and when finished it would be more distant from Suez, &c.

If difficulties arise in the other quarter, there seems nothing more requisite to put the communication

communication by Cosseir and the Nile into operation than the construction of a small river-going steamer, with five or six men, a good deal of spread on the water, and little depth; and to send the supply of fuel up the Nile in the common large boats, to be transported to Cosseir by the Arabs, from Kenné or Koptos; unless it should seem more advisable to purchase charcoal at Cosseir, whither it is brought some leagues by the Ababdi Arabs, and sold at the rate of eight or twelve piastres for a common sackful; so that whether coals be carried thither, or charcoal bought, the tribes in question would be equally interested in the continuance of this intercourse.

Any of these routes, however, which may be adopted, will probably only pave the way to the realization of the grand idea so long indulged in England and other parts of Europe, of connecting the Mediterranean with the Red Sea; a little time will probably remove the ill-founded apprehension of increasing the height of the former by the influx of the latter; for whatever natural cause can be supposed to exist likely to maintain the Red Sea at a higher level, can hardly fail to influence equally the Mediterranean, at the distance of little more than one degree. The land, it is true, shelves gradually from the Red Sea to the western shore of the Isthmus, at a mean difference of eighteen feet according to the French engineers, but it is very questionable that the sea itself is higher, communicating (as it does already) round Africa; but even if it could prove so, an additional inlet will no more increase the height of the Mediterranean than do the increasing and infinitely more voluminous ones from the Black Sea and Atlantic; the surplus is, and equally will be, disposed of by evaporation where seemingly greater, because the influx is literally regulated by the quantity exhaled, and, as I apprehend, can neither be more nor less whether supplied through one or six inlets; on which principle the Mediterranean (when it shall communicate) would as readily give to the Red Sea as receive from it, were not the temperature of the latter, and the exhalation, lessened by the cool north winds during the heat of the year; therefore a moderate current may be expected to run from the Red Sea. But it is rather to be feared that this will not give a sufficient body of water to open a noble passage for ships of moderate burthen, than that any prejudicial increase should be the consequence to the shores of the Mediterranean.

As to the executive part there is but one opinion, viz. that there are no serious natural difficulties; not a mountain, scarcely what deserves to be called a hill; and in a country where labour can be had without limit, and at a rate infinitely below that of any other part of the world, the expense would be a moderate one to a single nation, and scarcely worth dividing between the great family of Europe, who would all derive benefit from the measure; and were the Pacha heartily to consent, he could employ (as he did on the Mahomedan canal) 500,000 Arabs, feeding them out of his stores, and putting nearly all the contracted price into his coffers; he is fond of speculations, and this would be a grand one for the world at large and a very productive one for his purse.

(38).—LETTER from J. W. FARREN, Esq., His Majesty's Consul-general in Syria, to the Right Honourable CHARLES GRANT, President of the Board of Control, dated Holles-street, 26th January 1831.

(38) Letter from
J W Farren, Esq
to Right Hon
C Grant,
26th Jan 1831.

My dear Sir:

GOVERNMENT having now directed its attention to Syria, and appointed me there with the commission and powers of British Consul-general, for the purpose of effecting that public measure of commercial interest which was first entertained and adopted, and under so many difficulties has been uniformly and zealously supported by you, I request your consideration to another subject it now opens, and which is of great importance to the East-India Company, under a variety of circumstances, present and prospective—the shortest and most desirable channel of communication between this country and India.

APPENDIX,
No. 25.
continued.

(38.) Letter from
J. W. Farren, Esq.
to Right Hon
C. Grant;
26th Jan. 1831.

It is unnecessary for me to make any lengthened remarks on the importance of this object: I will therefore only observe, that the present state and prospects of Europe, the affairs of India, and our interests in Persia and Central Asia, in relation to them, make it one of daily increasing solicitude.

Hitherto Syria has been without the pale of British regard and protection, and this object has therefore been sought through channels with which we were in political connexion: my appointment, however, over the whole of Syria (and, may I add, my local knowledge and acquaintance with the character, resources, and customs of those countries) now present Syria to us under a new and practical point of view, as a medium of intercourse with India.

From Alexandria in Egypt despatches have to pass to Suez, where they are shipped, and the steam-vessel proceeds down the Red Sea to India.

It is clear that the East-India Company derive and cultivate no collateral interest whatever by this route. The passage of the Red Sea at seasons is dangerous; the countries which border it are uncivilized, unproductive, and inhospitable, and in the whole passage to India not one object of political or commercial interest to the Company is combined with this course; and from all their affairs and correspondence in Persia and Central Asia, and their establishments at Bagdad, Bussora, and Bushire, they are as far removed as by the ordinary intercourse by sea. It is, in short, merely a medium for carrying despatches between India and England, sustained at an expense which is not at all lessened by any collateral advantage.

Now the despatches and letters, whether sent by the packet direct or from any Mediterranean port, would arrive equally as soon at Damascus as to Alexandria, and if by land through Constantinople, would unquestionably arrive sooner by twelve days at least; as the country between Damascus and the desert that separates Egypt from Syria is mountainous and broken. From Damascus to Bussorah the Tartars go in ten, twelve, and fourteen days, and even less; and from Bussorah to Bombay the sailing voyage is about a fortnight or eighteen days.

The Tartars thus employed form a regular and a Government establishment, as the post of Turkey; they are provided with special firmans from Government; are invariably employed to carry the revenues of the pachalics to the Porte; are sent with large sums to the most distant parts by bankers, pachas, and merchants, and carry all the despatches from the different Governments and from the ambassadors and European authorities in the interior. The established European post from Smyrna to Constantinople, twice a month, and from Constantinople under the Austrian embassy there through Vienna to Europe, is conducted by these Tartars, without any idea of insecurity being entertained in respect to it by the merchants and residents in those parts. During the time I was in Turkey I never heard of any one of these Tartars being molested or impeded; and the necessary arrangements, understanding, and security being made with the districts on the route from Damascus to Bussorah, and a good personal feeling and proper influence and intercourse being sustained with them by myself and in my official character, as well as the communication being recognized as belonging to and under the special protection of the British and East-India Governments (as that at Constantinople is under the Austrian), I feel perfect confidence in the regularity and safety of their dispatch.

By this route, therefore, time would not only be gained, and the transmission of duplicates by land or sea combined in it with nearly equal advantage, but the East-India Company would acquire a direction and control over the first and regular intercourse from Europe with Western Asia, and with the districts in its route, which is a point of some consideration; and what is also of infinite importance to the Company, and as such I strongly urge on your consideration, it takes up a line which draws in all our relations and interests in Persia, and embraces and facilitates the correspondence of our Indian Government, the Board of Control and the Directors, with each other, and

with Tabreez, Teheran, Ispahan, Bagdad, Bussorah, and Bushire. It enables the Government here to acquire much earlier and more frequent information (and this is of vast consequence) than by the other route, of all those political urgencies and occurrences which may call for immediate action, as well as of the proceedings of their agents in those parts. It opens new sources of general information respecting those countries through the observation of travellers in the service of the Company, who would more commonly take that route. It is a course from which, when once familiarized to our ideas, lines of inquiry will strike off in various directions through regions which invite our inquiry, and possess capabilities for repaying our commercial enterprize. Through those parts we shall be extending an acquaintance with the British name, the British character, and British influence, and in those parts it is our especial interest to do so. And in conclusion, it has an obvious tendency, which, if I do not now dwell on, I cannot too strongly express my sense of the importance of, in respect to the pecuniary interests and the political objects of the Company in Persia and Central Asia; it has an obvious tendency to attract commercial men, in this country and India, to the commercial capabilities in Persia, and offers an invitation and facility for their cultivation, by enabling them to form establishments and trials in so intermediate a situation between India and England, that with each their distance of intercourse could be little more than a month.

If you look at the length of the voyage from Suez, and its sterility of interest, political or commercial, and contrast it with the course through Syria and Bussorah, taking up the whole line of our important political interests with Persia, and opening new commercial interests in the route, I believe that, in respect to time and other important objects, you will deem the latter preferable; and if so, will give it, I trust, your encouragement.

Believe me, &c.

(Signed) J. W. FARRER.

His Majesty's ship Alligator left Bombay on the 27th instant, and reached Muscat the 4th February, passed Cape Jask the 8th, having sailed from Muscat on the 7th, where they remained three days; off the Quoins the 9th, Cape Nabon the 10th, Cape Verdistan the 11th, and passing close to Bushire reached Karrack on the 13th, making the passage, under some delays, in fifteen days. After taking a pilot at Karrack they lost the wind, sprained a mast, and were considerably impeded by the current of the Euphrates, which made them five days from Karrack to Bussorah, a distance not further than from Verdistan to Karrack, which was performed in two. The voyage altogether was nineteen days, and might be done by a steamer in a fortnight; from Bussorah to Damascus twelve, making twenty-six days; from Damascus, by steam, to Leghorn, Trieste, Malta, or Marseilles, from six to fifteen days; and to London in seven or fourteen days or a month, allowing ample time in two months. If from Damascus to Constantinople by land, twelve to fourteen days, making thirty-four; and from Constantinople the ordinary post is twenty-eight, though couriers arrive in nineteen, twenty-one, and twenty-three days. If from Damascus to Malta, by steam, six days; and from Malta to England, by the regular Government steam packets, twenty-three days, making twenty-nine days from England to Damascus.

(39).—LETTER from the Court of Directors to the Governor in Council at *Bombay* (Public Department), dated 14th March 1832.

Para. 1. We shall now reply to the letters noted below* which relate to the maintenance and employment of the steam-vessels attached to your Presidency, and to the proposed increase of their number, for the purpose of more expeditious communications between India and Europe by means of the Red Sea.

ANSWER

(39.) Letter from Court of Directors to Bombay Government; 14th March 1832

* Marine Letter, 16th April 1830, ditto, 12th November, No. 15; ditto, 25th July 1831, No. 10.

APPENDIX,
No. 25.
continued
Steam
Communication
with India;
and on the Rivers
of India

ANSWER to Letter dated 18th April 1830.

APPENDIX,
No 25.
continued

39) Letter from
Court of
Directors to
Bombay
Government,
14th March 1832.

2. Your letter of the 18th April 1830, communicates some information respecting the probable expense of steam vessels for the Red Sea. You consider the expense over-estimated in the statement from the Marine Department, dated 17th April 1830. We, on the contrary, consider it under-estimated, because that statement omits many items which ought to be taken into account. The statement, corrected accordingly, would stand as follows:

Teak-built Bombay vessel with engines and stores complete, } 160-horse power: the hull and engines last fifteen years; the boilers last four years, and after repairs three years longer }	Rs.	£
	3,52,071	= 33,800
One additional boiler (in England)	£1,200	
Repairs twice, at £300 ditto	600	
		1,800
		£35,600

ANNUAL EXPENSE.

Capital sunk annually for fifteen years in vessel, Rs. 23,471 on	£2,249	
Ditto .. ditto in boilers	120	£
		2,369
Interest on capital at 6 per cent, Rs. 21,000		2,012
Insurance at £7. 10s. per cent. on the half of £35,600, or £17,800		1,335
Establishment, Rs. 37,600		3,603
Stores and repairs, Rs. 8,000		766
Provisions, Rs. 7,500		719
Coals, half a year's or 182½ days' consumption, at 24 hours to the day, sup- posing the vessel unemployed or under sail the other half year. One bushel per hour for every 10-horse power: 84 lbs. are equal to one bushel: number of tons 2,628 (This is the rate of consumption of the very best coals, that of inferior coals is greater.) 2,628 tons, or 1,941 chaldrons in London, at 30s.		2,911
Freight from London to Bombay, at 40s. per ton		5,256
Insurance from London to Bombay, at 3 per cent.		245
About one-quarter being put on board the steamers at Bombay, the remain- ing three-quarters, or 1,971 tons, at Mocha, Cosseir, or Suez; freight to those stations, assumed on the average at 50s. per ton, to Mocha being probably less and to Cosseir and Suez more		4,927
Insurance on ditto, from Bombay to Suez, assumed at 3 per cent. on £11,500		345
Add expense of landing, warehousing, and reshipping coals at Red Sea stations, 1,927 dollars (see Captain Pepper's letter, dated Aden, Novem- ber 1829), for six times only, the smallest supposable number, would be dollars 11,562), at 4s.		2,312
		£26,800

This computation gives £6. 1s. 6d. per ton in the whole quantity, or £7. 1s. on the three-fourths of the Red Sea stations.

Coals purchased at Alexandria and sent over the Isthmus of Suez would be £6. 10s. per ton (see Mr. Barker's letter, dated 23d January 1829), and the expense of putting them on board the steamers would have to be added.

The annual expense of the Hugh Lindsay's coals is computed in the Bombay statement of 17th April 1830 at rupces 71,400; but the actual expense of coals appears by a sub-sequent

sequent statement to have been in 1830, 49,501 rupees for three months, and in 1831, rupees 33,361 for three months, with the following note: "The amount of coals is less this year on account of their being partly freighted in Government vessels; but as all the bills for the conveyance of coals to and from different places in the Red Sea have not come to hand, it is probable the amount will be fully equal to that of the former year." It must not, however, be supposed that employing Government vessels to carry coals costs the Government nothing, and for the most part the coals must be sent by private sailing vessels, which must go for that express purpose and can bring nothing back. The statement besides includes no allowance for risk, and it does not appear what allowance is made for freight.

First outlay of steam vessels, at £35,600 per vessel	...	...	...	...	£142,400
Annual expense of four steam vessels, at £26,800 per vessel	...	...	...	...	£107,280
Expense of one steam vessel for fifteen years, including the original outlay	...	...	...	...	£402,000
Expense of four steam vessels for fifteen years, including the first outlay after this period, the original outlay of £142,400 would recur	...	...	...	...	£1,608,000

3. We give this statement as an approximation only. We desire that you will return us a statement on the same principle, taking care to bring into view any item here set down, and any others that we may have omitted.

4. The annual expense of two Red-Sea steam vessels would, according to this statement, be £53,600, supposing that the vessels and engines turned out well. But there is little ground for this supposition.

5. We transmit a number in the packet, a letter to the Supreme Government, on the subject of the Telica steam vessel, in which we have shown how very far from encouraging are the experiments hitherto made in India in the building or purchasing of steam vessels.

6. The loss from defective vessels or engines is still as likely as ever to occur, and every loss of this description must be added to the annual charge. The expenses of the surveying vessels must also be brought into the calculation.

7. Steam vessels on the Mediterranean side of the Isthmus of Suez would cost less than on that of the Red Sea in fuel, and in some other particulars. Still, taking all circumstances into consideration, we are satisfied that one hundred thousand pounds (£100,000) would be a very low estimate of the annual charge of four steam vessels, two for each side of the Isthmus, even if all circumstances of the original outfit of the vessels should turn out much better in future than in the great majority of past instances; supposing all future experiments should turn out as ill as the past, it is impossible to compute the magnitude which the expense might attain.

8. We are not insensible to the advantages of a rapid communication with India, and of the importance of encouraging the application of steam to that purpose.

9. We are also disposed to believe that a steam communication by the Red Sea, and still more, if it should be found practicable, by the Persian Gulf and the River Euphrates, would open the way to other improvements, and would ultimately redound to the benefit of this country as well as of India; and if our finances were in a flourishing state we might possibly feel it a duty to incur even the enormous outlay which we have specified. But in the present condition of our resources we cannot think the probable difference of time in the mere transmission of letters a sufficient justification of such an expense. We cannot anticipate that the return in postage and passengers would pay more than a very small portion of the charge.

10. These considerations induce us to pause before we determine the great question of

APPENDIX,
No. 25.
continued.

(39) Letter from
Court of
Directors to
Bombay
Government,
14th March 1832

of engaging in any project of this character at present; not seeing our way clear to such a result as would justify the expense, we shall not authorize any further steps in the matter.

11. At the same time we deem the subject too important to be lost sight of or hastily dismissed. We shall, therefore, not fail to carry on inquiries into the practicability of effecting the end in view at a reasonable expense. We desire that you also will prosecute similar inquiries, and communicate to us the result, but that you will not adopt any measure involving expense without our previous sanction.

ANSWER to Letters dated 12th November 1830 and 25th July 1831.

12. The preceding paragraphs were prepared some time since, but we have deferred their transmission in the expectation that more recent experiments might throw some additional light on the subject. But the only communication in the above letters which it seems necessary to advert to is the letter from the Superintendent of the Indian Navy, dated 23d August 1830, in which he states that to keep up the communication from Bombay to Suez by steam four steamers will be required, three of them only manned, as "one is supposed to be constantly under repair." Our calculations above were made for two steamers only on the Bombay side of the Isthmus. The Superintendent furnishes a statement, making the expense of one of these vessels rupees 23,125. 2. per quarter. This would make the expense of the three working steam vessels for that side of the Isthmus nearly three lacs of rupees per annum, leaving the charges for the fourth, or the one continually under repair, to be added, which it may be presumed would make the charges for the four, according to the Superintendent's view, about four lacs of rupees per annum. But this statement, like that of 17th April 1830, omits many essential particulars, and requires to be reconstructed on the principles of our preceding calculation, which a diligent and careful enquiry has satisfied us is rather below than above the probability of the natural charge: and indeed, without going again over our former ground, it will be sufficient to observe that the actual expense of the *Hugh Lindsay's* coals for three months was, on both her late voyages, more than double the amount allotted in the Superintendent's estimate for the entire cost of the voyage, including establishment and wear and tear of the vessel. With respect to the superintendent's plan for supplying the Red Sea stations with coal, as in the passage cited below,* the best insight we can obtain into the subject has given us every reason to think that it would be neither so easy of accomplishment nor so economical as the Superintendent believes.

13. You will receive this despatch as including in it the reasons of our having complied only in part with your indent for coals and tallow, dated 15th March 1830, and for our not complying with your more recent indent, dated 7th June 1831.

We are, &c.

(40) Extract
Letter from
Bombay
Government:
18th May 1832.

(40).—EXTRACT LETTER from the *Bombay* Government to the Court Directors
(*Marine Department*), dated May 18th 1832.

Para. 1. WITH reference to the letter from your Honourable Court's Secret Committee, dated the 18th of June 1831, we have the honour of transmitting to your Honourable Court

* 10. "I would also beg leave to suggest that the supply of coals should be the *Blougenmach* coal, and that it should be annually deposited at *Mocaa* or *Paim*, whichever may be the head station, direct from Europe. The vessels leaving Europe from February to May, would enable ships coming to this Presidency to take the coals at a very reasonable freight, as in being able to leave the *Red Sea* from June to September they would have a quick passage to this port, and the coals might be conveyed by country craft from either of these ports to *Suez* or *Cosair*."

Court the accompanying copy of a Minute by our Right Honourable President, submitting the result of his inquiries on the subject of an overland communication between England and India, either by the Red Sea or through Turkish Arabia, together with copies of two papers received by his Lordship from Commander Wilson of the Honourable Company's steamer *Hugh Lindsay*.

2. We heartily concur in his Lordship's views as to the great public good that must result from the establishment of a regular and speedy communication with England *via* the Red Sea, which is attainable by steam navigation alone; and in the event of your Honourable Court's seconding our exertions, and causing steam vessels to be constructed for the navigation to the Red Sea, we conceive Commander Wilson's proceeding to England to enable the engineers to profit by his personal knowledge and experience as to the descriptions of vessels best suited for the purpose, to be highly expedient.

3. We have consulted his Majesty's Consul-general in Egypt as to the facility of landing coal at Damietta, and of transporting it across Lake Menzaleh and the Desert to Suez, and the probable cost by the ton, specifying each and every head of expense; and we have also requested his opinion on the practicability of the plans suggested by Captain Chesney for facilitating the undertaking, and on the effect which he thinks the proposal to adopt them would have on the Pacha of Egypt. We have also requested Mr. Barker to transmit to your Honourable Court, with as little delay as possible, a duplicate of the report which he may make to us in answer to this reference.

(41.)—EXTRACT MINUTE of Earl CLARE, Governor of *Bombay*, dated Parell,
May 4th 1832.

(41.) Minute
of Governor of
Bombay.
4th May 1832.

I PROCEED to make some observations to the Board, on the only part of the subject treated of in these papers with which I can pretend to have any acquaintance, and that is the facility of communicating with Europe by the Red Sea, and I beg to say that my knowledge is very confined, being the result of what I learned in the course of my tedious journey overland last year.

The Court desire us to make minute inquiries on the subject of an overland communication, either by the Red Sea or through Turkish Arabia, and to transmit with the least practicable delay the result to the Court, and to the Governor-general.

I believe as much information as could be obtained on the subject of the passage by the Red Sea, in the absence of almost any practical experience, has been already sent home, and the great importance of establishing a quick and certain intercourse between England and India, by the means of steam vessels from *Bombay* to Suez, and *vice versa*, has been over and over again urged on the immediate attention of the Court. I will not therefore take up any portion of the time of the Board by enlarging on these topics, but will content myself by stating that I presume the importance of this object is now admitted on all sides, both here and at home, and by expressing my hope that the Court will be induced shortly to direct the measures which should be taken to bring, I may almost say, Europe and India together.

I think the three voyages which the *Hugh Lindsay* has made to Suez and back (the two latter at the most unfavourable season of the year for a voyage down the Red Sea to *Bombay*) have proved to demonstration that the experiment has succeeded beyond the most sanguine expectations of those who were well aware of the difficulties attending its navigation, for it must always be remembered that though the *Hugh Lindsay* is an admirable steamer, perhaps the best I ever saw, she was not constructed for so long a voyage, and that when laden with coal for a voyage of eleven or twelve days (as she was only constructed for a voyage of five or six days) she is so deep in the water her course is very much impeded; and instead of going eight or nine knots an hour (the natural speed of the vessel when at her proper height above the water), she does not go more than five

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No. 25.

continued

(41.) Minute
of Governor of
Bombay :
4th May 1832

or six knots in the hour, and notwithstanding this impediment to her steaming, I can safely say, from my own experience, that she made her way well and bravely against the most tremendous sea I ever encountered in a steam vessel, and I have been in the habit of making voyages in steam vessels between England and France, and still oftener between England and Ireland and back, ever since their establishment in our parts. If, therefore, the *Hugh Lindsay* with this disadvantage has done so well, what may we not expect from steam vessels built expressly for the voyage, with the knowledge we now have of the sort of steam vessel which we require?

The great mistake which all persons who write on the subject seem to me to make is, that they attempt to make out too good a case, and Captain Chesney stands in this predicament. I doubt exceedingly whether any, even a powerful steam vessel could ascend the Red Sea at the rate of six or seven knots an hour, during the prevalence of the strong northerly winds from May to October, and from what I have heard, I believe those winds are anything but moderate, and that though a violent gale of wind may be of rare occurrence, the swell is so great in that narrow sea, the course of a steamer is much more impeded than if she were beating against a more violent wind in the open ocean; and it is quite idle to talk of "unshipping the paddles and sailing the whole length of the Red Sea during the prevalence of what Captain Chesney calls the trade winds up and down the sea, going at the rate of eight or ten knots an hour without steam, in a nice breeze and smooth water." The truth is, this easy navigation exists only in Captain Chesney's imagination; and I believe I am quite correct in saying, that no vessel properly constructed as a steamer could be so constructed as also to sail well in the Red Sea.

In a former Minute I have stated fully the difficulties attending the navigation down the Red Sea in the winter months from what I know, therefore on this part of the subject, and from what I have heard from others, I incline to think that Captain Chesney makes it to be a much easier matter than it is in reality.

In calculating the time required for the transmission of letters to Alexandria, I think it better rather to talk of days than hours, for I consider it to be next to impossible to say in how many hours the despatches can be sent there, whether landed at Cosseir or at Suez. It does very well to calculate by hours in sending a letter from London to Edinburgh, but it is very different when the question of sending one from Bombay to Alexandria, upwards of 3,500 miles, is soberly and seriously under the consideration of Government.

I believe the route by Suez will prove the easiest, the quickest, and the cheapest for sending despatches. Captain Chesney says 4½ dollars only were asked for eleven camels to take him from Cosseir to Kenné, and it might therefore be supposed that the sum he gave is the average price paid for camels crossing the desert of the Thebaid. I am of opinion that Captain Chesney is mistaken, and that the price is much higher. I paid from Gheneh to Cossier, 25 piastres, one dollar and three-quarters for every camel I hired; possibly I paid too much, but from the great traffic across the Desert, and from the numbers of camels which I saw laden with grain from the banks of the Nile, and destined for Cosseir, whence it is shipped for Arabia, I do not think camels can be had generally at a less price; but as the camels on their return from Cosseir almost always come back without any load (there being little foreign commerce to Cosseir, and the barren shores of the Red Sea not producing any thing), a person like Captain Chesney, who desires to cross the Desert to the Nile, can I dare say generally get camels at the price he mentions (I met hundreds returning to Gheneh without any load), but it is a mistake, I think, and calculated to mislead the authorities at home, if it is taken as the price of hired camels in Egypt.

I doubt whether a river-guling steamer could, as Captain Chesney says, ascend and descend the Nile at all times to Rosetta; in the early part of the month of November 1830, when the river is by no means as low as it is later in the year, the boats in which we sailed were frequently aground, and from the number of sand-banks in the river, which,

which, particularly at night, it is very difficult to avoid, I hardly think, except during the time of the inundation, a steamer would be of any use. I should also say that the time allowed by Captain Chesney for descending the Nile from Gheneh to Cairo is too short; but I believe he is pretty correct in stating that a Tartar on a dromedary can reach Alexandria from Cosseir in ten days, going through the Desert, though it would not be safe to take so short a time as the average for sending despatches by that route.

For these reasons, therefore, I am of opinion that it will be better at all times for the steam-vessel to go up the Red Sea to Suez, and there to land her despatches. She will reach Suez from Bombay with tolerable certainty in twenty-six days (allowing ample time for taking in coal at Maculla and Judda, in which work six days are now consumed at those two ports; but by sending proper boats and baskets I should say full one-third of the time might be saved); and the despatches would be carried by an Arab messenger with the greatest ease in less than two days to Cairo, from which city there is a daily post to Alexandria; and if two days more are allowed, the packet would be received there in thirty days from Bombay.

Captain Chesney suggests that coals might be landed at Damietta, and transported thence, as he describes, to Suez, and he states the possibility of the undertaking by the means of sundry works which he enumerates, and which I have little doubt, if Egypt were a province dependent on Great Britain, might be accomplished, and he ends by the magnificent project of connecting the Mediterranean and the Red Sea.

In my opinion it will be prudent to confine ourselves to the real facilities which with little trouble or expense Egypt now offers under the enlightened rule of that wonderful man Mahomet Ali Pacha for an overland communication with Europe, by sending our despatches *via* Suez and Cairo. He governs the country with so firm a hand, as to leave nothing to be desired by any stranger passing through it with respect to the security of his person and property.

I believe the Pacha wishes to encourage the intercourse of Europeans with Egypt, and that he has no sort of objection to the influx of any number of travellers through it on their way to India. He has made the passage of the Desert, by the strong measures he has taken with the Arab tribes, perfectly secure, and he has done so because he receives a considerable revenue from the corn and merchandize which is transported across it; and he knows very well that unless the route is safe from plunder he will suffer more than any one else.

When I saw last year that Mahomet Ali Pacha, enlightened and wise as he undoubtedly is beyond almost all other Eastern rulers, would not allow even a buoy to be fixed or a light-house erected to assist mariners in steering their vessels into the difficult and at present somewhat dangerous port of Alexandria, I cannot suppose the same person will ever consent to the removal of the obstruction at Damietta Bar by means of machinery, or the improvement of the passages from the lake Menzaleh to the sea, with the view of enabling us to send our coal through his country to Suez at a cheaper rate than we can now send it by the circuitous voyage round the Cape. As, however, the supply of fuel for the steam-vessels is a most important consideration, a letter may be written to His Majesty's Consul-general at Alexandria, and he may be asked the question as to the facility of landing coal at Damietta and of transporting it across Lake Menzaleh and the Desert of Suez, and the probable cost by the ton, specifying each and every head of expense; and he may be requested to send a duplicate of his report to the Court for their information. As Mr. Barker, the Consul-general in Egypt, is intimately acquainted with the country, it will be well to send to him a copy of Captain Chesney's letter, and his opinion may be asked on the practicability of the plans suggested.

I have already stated that despatches may be received from Bombay in thirty days at Alexandria, and supposing a communication by steam established between that port and Malta, as the distance is full 800 miles, seven more days must be allowed; and if three weeks are taken as the average time for the passage from Malta to London, I

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continued.

(41) Minute
of Governor of
Bombay;
4th May 1832

have little doubt that in eight weeks, almost during the greater part of the year, our despatches may be conveyed, I may almost say with certainty as long as Mahomet Ali Pacha shall govern Egypt, from Bombay to London; but unless the Court shall, in conjunction with his Majesty's Ministers, establish a steam communication between Malta and Alexandria, great and unavoidable delays will be experienced in forwarding them. I should think that by extending the voyage of the Malta steamer, and adding to the number of steam-vessels on that station, the object might be accomplished without much difficulty or any great additional expense; and considering the importance of a quick and certain communication with India, it is one which deserves the serious and immediate attention of the Court and Board.

During the south-west monsoon I do not think it possible, from all I have heard, for a steam-vessel to navigate the Indian Ocean. The port of Maculla in Arabia, which must be the depôt for coals, is then, I understand, inaccessible; but even if it could be approached I believe the violence of the wind is too great to enable the steamer to cross the ocean to Bombay.

In order to reach Malta before the return of the steam-packet to London the first week in every month, the Bombay steamer should start about the 20th of the month, and I should say that from the 20th of May to the 20th of September, at soonest, the communication from Bombay must be interrupted, and the steamer which leaves Bombay on the 20th of May must remain at Suez during the monsoon.

The Malta steam-packet, which leaves Falmouth about the first Tuesday in every month, may be calculated to reach Malta in three weeks; and allowing two more weeks for the India despatches to reach Suez, I do not think the Bombay steamer could start from that port before the middle of the following month; but during the greater part of the year her passage back may, I think, generally be made in twenty-four days, except perhaps during the months of December and January, when a little longer time must be allowed; but it is not too much to say that in all human probability we may also receive despatches from England in eight weeks. The Bombay steamer should leave Suez at latest on the 10th of May, to insure her arrival before the commencement of the monsoon; during eight months, therefore, of the year there may be a regular and steady communication to and from England every month, and answers may be received to despatches in four months, being less than the ordinary duration of one voyage home round the Cape.

To ensure this most desirable object, we should, I think, have at least four steam-vessels, constructed on the newest and most approved principle, each calculated to carry fourteen days' consumption of fuel without being deep in the water when so laden and fitted up for the accommodation of passengers, great numbers of whom would, I feel convinced, if the communication was regularly established, prefer this route to the long voyage round the Cape. I have stated in a former Minute that Maculla should be the depôt for coal, and a supply must be always laid in there before the monsoon; the quantity required may be calculated without difficulty, according to the probable consumption of the engines for sixteen voyages to the Red Sea and back in each year. We shall require four steamers at least in the event of any accident occurring to the machinery of the vessels steaming, as it would not be safe to calculate on a steamer being able immediately to return after having made her passage, nor could the officers and men, particularly the engineers, stand the fatigue of being constantly afloat. The vessels may be sent out from England, or, which probably would be the preferable course, the engines should be sent to Bombay and vessels there built to receive them.

With respect to the communication through Turkish Arabia, I believe little is practically known in Bombay; whatever our records furnish should be extracted from them and sent home, and to the Governor-general. By detaching two sailing vessels to the Gulf before and during the monsoon, despatches forwarded *via* Vienna, Constantinople, and Bagdad, or by Petersburg and Tabreez and Bushire, might be twice received at Bombay, I should think, in less than four months from England, at a time when the

steam

steam navigation by the Red Sea will be necessarily closed. With this view I have in a former Minute proposed to try the experiment by directing a Paris newspaper to be sent by the route of Turkish Arabia, for I feel sure, until the trial shall be made, all our inquiries will lead to no practical result. There is, I understand, a route along the coast from Mundavie in Cutch, and through the Sind territory, to a port nearly opposite Muscat, which is used by the Bombay merchants in sending their letters during the monsoon, and advantage may at any time be taken of it when it is required to forward an important despatch, and from Muscat to Bushire and Bussorah the communication is at all times quick and easy. The Court I conceive, from what Mr. Farren says, whenever it is desirable to send a despatch with expedition to India, may safely send it by Paris, Vienna, and Constantinople, either to him at Damascus, or to Major Taylor at Bagdad, and the perusal of these papers confirms me in the opinion I have already recorded, how desirable it is to remove the head-quarters of our Resident permanently from Bussorah to Bagdad, where he will have certainly more opportunities of facilitating the intercourse with England by this route than he can have at Bussorah.

It would be difficult, in the absence of any certain knowledge on the subject, to give an opinion which is the preferable route for an overland communication, whether by Syria or Turkish Arabia, or by the Red Sea. We have some experience of the facilities afforded by the latter route, and we know that it may be considered at present safe; and until we know something more of the other route, I am inclined to prefer it. Undoubtedly, if letters were sent from Malta direct by a steamer and landed in Syria, and that they could be safely forwarded by Tartar messengers from Damascus to Bagdad and Bussorah, as stated by Mr. Farren, we should receive them sooner than by the Red Sea; and if hereafter this shall be determined on, the same steam-vessels which may be sent out for the navigation of the Red Sea will be equally adapted for the navigation of the Persian Gulf.

I have delayed circulating these papers until my return to the Presidency, in order that I might put some questions to Captain Wilson, on whose practical knowledge of the subject of steam navigation between India and the Red Sea the greatest reliance may be placed. Captain Wilson's Answers to my Queries, extracted from Captain Chesney's Report, fully bear me out in the opinions I have in this Minute given of several of his statements, and I beg to call the particular attention of the Board to an able paper on the steam navigation in the Red Sea, drawn out by my desire by Captain Wilson. If the Court shall decide to build four steamers with engines on the newest and most approved principle (I understand Braithwaite's steam-engines are best adapted for the purpose), I would respectfully beg to suggest to the Court the expediency of sending Captain Wilson to London, in order that full advantage may be derived from his practical knowledge and experience. Much of the success which I anticipate will depend on the construction of the vessels and the machinery supplied for propelling them, and I feel quite convinced that Captain Wilson's presence in London, giving the sort of information required, which no other person can give, will hereafter save the Honourable Company lacs of rupees, in the event of their deciding on an establishment of steam-vessels on an extended scale in this country.

I beg that copies of this Minute, and of a Minute which I recorded last July on the same subject, may be sent with as little delay as possible to the Honourable Court, and to the Governor-general.

continued
(42.) Capt. Wilson's
Answers to Earl
Clare's Queries

Extract from Captain CHESNEY'S
Letter.

During five months, beginning from the middle of May, the wind blows steadily and moderately down the Red Sea.

It is evident that the foregoing difficulties do not apply to steamers, which can make a straight course at all times, and which could ascend the Red Sea against the moderate winds prevailing there at the rate of six or seven knots per hour.

For I apprehend that a violent gale of wind is a rare occurrence in that sea.

And the sequel would prove that a steam vessel (of moderate power) can ascend with much rapidity even at the most unfavourable moments.

Cosseir offers one route, its port is an open one, but perfectly safe.

The next route that presents itself is that by Suez.

Simply because there is what may be called a trade wind during a considerable portion of the year, down at one period and up at another, making it well worth while to unship the paddles

QUERIES.

- - Does not the north wind blow strong down the Red Sea during those months?

- - Can a steam-vessel go at this rate up the Red Sea against the north wind?

Is this the case?

Can she? - -

- - Is the port safe at all times, and could a steamer remain at anchor in it, if necessary, during the prevalence of the south-west monsoon, when she could not return to Bombay?

- - Which is the best anchorage, with reference to the foregoing question?

- - Is a steamer with paddles unshipped capable of navigating the Red Sea with the south wind up and the north

ANSWERS.

- - From May till August frequent strong north-westers blow down the Red Sea: in the intervals between them a moderate northerly wind is generally experienced from the end of August the winds are more variable.

- - I have stated above that the most prevalent winds are by no means moderate, and northerly winds would frequently be experienced even in the months between October and May, in which a fast steamer would not make good more than two and a-half knots; between May and September the northerly winds at times blow so hard that little better than one and a-half knots would be made against them.

- - Although it is true that what seamen call a violent gale is not often experienced in the Red Sea unless in a squall, still a gale is by no means a rare occurrence.

See answer above.

- - The port of Cosseir cannot be considered a safe one, there is almost always a swell setting into it, from its being perfectly open to the sea, and during easterly, north-east, or south-east winds there would be much danger in remaining there, the fact is, the whole of that part of the coast of Egypt possesses no tolerable harbour, at once sheltered and easy of access, or Cosseir would never have become a sea-port.

- - The port of Suez is unquestionably the best, as it is safe at all seasons of the year.

- - A steamer with her paddles unshipped might make seven or eight knots an hour if rigged with square sails while in the southerly wind; but the southerly wind alluded to, which prevails in the lower part of the Red Sea (during the north-east monsoon in the Indian Sea), blows only

Extract from Captain Chesney's
Letter.

to sail the whole length of the Red Sea, going at the rate of eight or ten knots without steam.

Going at the rate of eight or ten knots without steam in a nice breeze and smooth water, not offering any serious impediment or delay when contrary.

QUERIES.

wind down the sea, and at what rate?

- - Is there often smooth water in the Red Sea?

What is your opinion on the possibility of constructing a steamer which shall be also adapted for a sailing vessel in the Red Sea?

ANSWERS.

only about one-fourth of the way up, after which variable winds, or north-west-ers, would be experienced; of course the northerly wind would propel the vessel down the sea in the same way; but its extent of continuance is variable, nor does it ever blow like a trade wind, but in strong occasional bursts, with light or variable winds between.

- - The swell rises and falls very quickly in the Red Sea, and smooth water is seldom experienced for many successive days; but I never saw a nice breeze in any sea sufficient to carry even a fast sailing ship ten knots which did not bring with it considerable swell, still less so in the Red Sea, where every increase of wind speedily raises a chopping sea (often increased by varying currents) which very much impedes a steamer.

- - From the distance a vessel has to go to reach the Red Sea, however the coal depôts may be arranged, all her stowage would be required for the coal and other things which are indispensable, and there would be no room to stow away all the masts, yards, sails, standing and running rigging which she must have to sail with any advantage (not to mention the variety

of spare stores thus rendered necessary) and which must all be down and stowed away when going against the wind, the lower masts, too, if sufficiently large to bear all the sail that would be requisite, would, by their weight and size, materially impede the vessel's progress in going against the heavy winds which would be so frequently encountered in the Red Sea; it frequently happens there that vessels are taken aback when running with a fair wind: a steamer so situated would be placed in rather an awkward predicament if near any of the numerous shoals where there is no anchorage with her paddles unshipped; some hours would elapse before they could be reshipped, and the vessel got under steam, as well as all the sails and masts and yards got down with which she was encumbered; and if she did not drift on the nearest shoal, she certainly would lose much that had been gained by sailing, besides the risk incurred. I am therefore of opinion that a vessel for the Red Sea should depend on steam, and be only furnished with sail sufficient to lay to in heavy weather in the event of accident to the machinery, or to act as an auxiliary to the engines in a fair wind.

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No. 25.

Continued.
Steam
Communication
with India,
and on the Rivers
of India.

(42.)—REPORT by Captain WILSON, dated 4th May 1832.

THE practicability of steam navigation by way of the Red Sea having been proved by the performance of the voyage thence by the *Hugh Lindsay*, under peculiar disadvantages, the following

(43.) Report by
Capt. Wilson.
4th May 1832

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No. 23,
continued.

(13.) Report by
Capt Wilson:
4th May 1832.

following opinions on the plan and class of vessels best calculated for the purpose are offered as the result of experience in the trips made by that vessel.

It has been found that the greatest impediment to the speedy performance of the voyage is the delay occasioned by taking in coal at the several depôts in the Red Sea; it follows therefore, that the plan which can be carried into effect with the least delay of that description must be most eligible. If then the voyage from Bombay to Cosseir or Suez could be performed in two stages, our object would be obtained. The distance from Bombay to Mocha is 1,780 miles, which during the north-east monsoon might always be accomplished in eleven days; the *Hugh Lindsay* made the passage from Bombay to Aden, 1,640 miles, in ten days and nineteen hours, without the assistance of the north-east monsoon, as she started on her first trip late in March, and the north-east winds failing sooner than usual, she had light westerly breezes against her the whole way, besides the disadvantage of starting with eleven days' coal on board, when built to carry five and a-half only, which so affected her speed that at starting she went but five and a-half knots, and for the first four days did not exceed six and a-half: if then she, under such circumstances, could perform a distance of 1,640 miles in ten days and nineteen hours, there can be little doubt that a vessel built to to carry fourteen days' coal would perform 1,780 miles (the distance from Bombay to Mocha) in eleven days, if she went at the rate of six knots the first three days, six and a-half the next two, seven the next two, seven and a-half the next two, and eight the last two days (in all eleven) she would complete a distance of 1,824 miles, which exceeds that she would have to go; and this progressive increase of speed would, I doubt not, be experienced. Should objections be raised by engineers to a vessel steaming eleven successive days, I can only state the fact that the *Hugh Lindsay*, deeply laden as she was always when starting for the Red Sea, and when consequently her engines must have borne an unusual strain, did steam ten days and upwards, under full pressure, on her first trip, and on the two last nearly nine; and at the end of each the boilers were so clean and the flues in that state, if requisite, she could have steamed two or three days longer without the least detriment. I conclude then, that the passage, from Bombay to Mocha might be made in one stage of eleven days; and if so, that from Mocha to Cosseir or Suez could be made in the same period at any time during the north-east monsoon, and frequently in less, as the distance from Mocha to Suez is only 1,200 miles: thus the voyage from Bombay to Suez might certainly be made in twenty-five days, including three days stay at Mocha to take in coal, slight repairs, &c., though less time would usually suffice.

The class of vessels I should consider fittest for the purpose would be those of about 260 or 270 tons, with engines that would not consume more than nine tons of coal in the twenty-four hours, their draught not to exceed ten feet six inches when laden. They would require to be built fuller than such vessels usually are, to give them the necessary capacity; but that they would possess sufficient speed to perform the passage as above stated I have not a doubt; and four such vessels would be sufficient to keep up a monthly communication from Bombay to Suez during the north-east monsoon. I must here observe that too much is expected of steamers which are required to make long sea voyages: such vessels cannot be constructed on the fine models which coasting steamers have, whose longest trips are from three to four days, and consequently have less speed, but if vessels can be constructed as proposed, possessing the speed above stated, and by means of which a communication with Europe in eight weeks kept up during nine months in the year, it is surely an object worth attaining. I have been led to fix on this class from the following considerations: the conveyance of despatches and letters must be the primary object; that of passengers a secondary one, because, to carry any number of passengers that would make a return worthy of consideration, the accommodation indispensable in a warm climate could only be afforded by vessels of a very large class; which, besides the great outlay in building and equipment, would consume an enormous quantity of coal, the furnishing which for use in the Red Sea will form one of the heaviest items of expense attending steam navigation in that part of the world, whichever way it may be done; again, the great expense and difficulty of maintaining the requisite establishment of engineers to keep

keep vessels of a large class efficient, from the proneness of those people to inebriation, and the consequent loss of their services by frequent sickness or death; this has been felt with the Hugh Lindsay: lastly, large steamers could not go into the sheltered anchorage at Mocha.

The return passage from Suez to Bombay would require a different arrangement, as when the north-east monsoon blows strong, the distance from Mocha to Bombay would be too great to be accomplished by a vessel carrying even fourteen days' coal; from Suez to Mocha would always be effected by a vessel of the proposed description, in all the varieties of weather she might encounter, allowing a variation of two to four days in the passage, when she might be obliged to take shelter from the southerly winds blowing unusually strong; but it would be necessary to break the distance between Bombay and Mocha, and I know no place better suited to the purpose than Maculla; as the north-east monsoon blows strong between Mocha and Maculla, the vessel might leave the former with five or six days' coal on board, in good steaming time; on arriving at Maculla she would take in her full quantity, and make the passage to Bombay with certainty.

I should think the most economical way of sending the necessary supply of coal to the Red Sea would be for Government to purchase it at the mines, and send it out direct to Mocha by private ships, so regulating their departure from Europe, that they should arrive at Mocha at the commencement of the south-west monsoon, when having discharged their cargo, they might in twelve or fourteen days cross over to Bombay, where they would get a return freight to Europe, and thus not going home empty, would be enabled to bring the coal out at moderate freight; there is now a respectable agent at Mocha, who would be perfectly competent to make any arrangements, and the proportion necessary to be sent to Cosseir or Suez he could transport to those places at the most favourable seasons of the year in Arab boats.

It may be thought that the constant strong winds which blow from the southward during the north-east monsoon, and which sometimes render communication difficult with vessels in the roads, would make it an unfit place for a coal depot during that season; this would no doubt be the case with steamers whose draught obliged them to anchor in the outer anchorage where ships usually do, but a vessel drawing ten feet six inches may anchor within the line of the north and south forts perfectly sheltered and in smooth water; and not more than 400 yards from the shore, so that boats might be hauled off and on with the coal, and a large coal shed about 100 yards inshore of the south fort would be all that is required. Should, however (which I did not anticipate), unforeseen difficulties occur in carrying the above plan into execution, there would be no loss of outlay in the vessels, as they would still be the fittest for the purpose; were it determined to continue several depôts as at present, having shorter stages to run, the room no longer required for coal would admit of more passengers being accommodated. In the selection of ports for depôts, it is not merely requisite that they should have a safe anchorage, and by situation a nearly equal division of distance, but they should afford the means of speedily shipping the coal by men and boats, water and other supplies should be readily procurable, and they should be the places in which, having the most commercial intercourse with India, we are well known, and should consequently meet with neither molestation or hinderance of any kind; on all these considerations, the ports I would select for depôts (should it be found impracticable to carry on the communication in two stages) would be Maculla, Judda, and Suez, or Cosseir.

In the foregoing I have merely sketched the general plan, the arrangement of details as to what establishment might be requisite at the several depôts, and the quantity of coal at each, when the class of vessels were determined on, would be easily effected; and I would only observe that the best plan would perhaps be to have hulks at the several ports, by which the expense and loss of time in landing and re-shipping the coal would be avoided. Maculla is the only place where a hulk could not remain in the south-west monsoon, but there is near it, about twelve miles to the westward, under Cape Broom, a perfectly sheltered anchorage in all seasons, to which the vessels might be removed before the setting-in of the south-west monsoon.

APPENDIX,
No. 25.
continued.

(44.) Letter from
G. G. de

H. Larpent, Esq. to
John Barrow, Esq.
23d Oct. 1832

(44.)—LETTER from G. G. de H. LARPENT, Esq., Chairman of the London East-India Trade Committee, to JOHN BARROW, Esq., Secretary to the Admiralty; dated London, October 23d 1832.

Sir :

At the request of the merchants of London connected with the East-India trade, and by direction of the Committee of the same, I take the liberty of calling the attention of the Lords Commissioners of the Admiralty to the expediency of directing the Admiral on the Mediterranean station to place the communication between Malta and Alexandria on a permanent footing, by which means the mails from Bombay brought by the steamers from thence may be regularly forwarded to Malta with as little delay as possible.

I am also requested to state, that an official notice has been given by the Government of Bombay, that a steamer will be dispatched on the first January 1833, from that Presidency to Cosseir, which place it may be expected to reach early in February next. The merchants of London trust, that their Lordships will be pleased to give some directions for some conveyance to be dispatched from Malta to Alexandria to receive the mails and passengers, about the time they may arrive at the latter place after crossing the Isthmus of Suez, in anticipation of any permanent arrangement, should the details of such a measure, so important to the India trade, require further consideration.

In proof of the necessity of some arrangement of the nature proposed, it may be proper to acquaint their Lordships that the last mails by this route were detained thirty days at Alexandria before an opportunity offered to convey them to Malta.

I have, &c.

(Signed) G. G. de H. LARPENT.

APPENDIX, No. 26.

APPENDIX,
No. 26.

AN ACCOUNT of the Exports by the East-India Company for each Year, from 1814; distinguishing Military Stores from Merchandize. Exports from 1814

INVOICE AMOUNTS. From May to May.	MERCHANDIZE.		TOTAL Merchandize.	Civil and Marine Stores to India and St. Helena, Stores to the Cape of Good Hope, and Factory Stores to China.	Military Stores in each Year to India and St. Helena.	TOTAL EXPORTS.
	INDIA.	CHINA, exclusive of Factory Stores.				
YEARS	Amount. £.	Amount. £.	Amount. £. °	Amount. £.	Amount. £.	Amount. £.
1814-15	716,731	857,257	1,567,978	142,455	364,390	2,074,823
1815-16	460,356	924,553	1,384,909	124,455	319,842	1,828,906
1816-17	482,114	839,241	1,321,355	163,462	424,376	1,909,193
1817-18	218,445	770,407	988,852	94,532	234,086	1,317,470
1818-19	241,729	656,404	898,133	223,371	259,420	1,380,924
1819-20	449,731	828,247	1,277,978	152,104	308,499	1,738,581
1820-21	575,790	892,289	1,468,079	124,661	289,176	1,881,916
1821-22	469,100	812,766	1,281,866	106,323	244,670	1,632,759
1822-23	354,754	688,010	1,042,764	139,614	282,659	1,465,037
1823-24	327,909	725,334	1,053,243	186,597	264,822	1,504,572
1824-25	71,870	683,739	755,609	169,453	308,712	1,233,774
1825-26	47,052	908,185	955,237	182,138	624,432	1,761,807
1826-27	2,557	758,215	760,772	229,391	944,132	1,924,295
1827-28	—	700,884	700,884	193,378	667,452	1,561,714
1828-29	—	599,017	599,017	162,054	344,864	1,105,935
1829-30	—	586,704	586,704	143,508	201,233	931,443
1830-31	—	589,300	589,300	82,234	92,032	763,566
£	4,412,118	17,232,680	21,644,798	2,619,340	6,174,695	26,026,715

(Errors excepted)

East-India House,
8th May 1832.

THOS. G. LLOYD.
Acct. General.

APPENDIX,
No. 27.
Chinese Produce
Imported;
1793-1831.

APPENDIX, No. 27

AN ACCOUNT of the Quantity of each Article of Chinese Produce imported into the United Kingdom, in each Year from 1793 to 1831.

	YEARS.			TEA.	SILK.	NANKIN CLOTH.	Miscellaneous Articles of Chinese Produce.
1793	lbs	lbs	Pieces	Value.
							£.
1793	16,067,331	171,998	77,898	26,692
1794	23,710,774	99,671	374,398	19,809
1795	27,208,003	158,225	146,365	19,186
1796	6,184,628	12,968	48,642	23,062
1797	16,235,125	78,520	77,338	23,252
1798	44,873,112	136,196	257,473	25,054
1799	15,090,080	63,604	184,490	17,131
1800	15,165,368	92,385	170,917	25,960
1801	29,804,739	131,335	366,851	29,293
1802	27,356,502	75,588	274,921	19,054
1803	30,843,134	74,538	232,894	23,134
1804	26,680,784	90,362	264,407	26,184
1805	28,538,825	76,359	252,207	15,198
1806	22,155,557	18,607	376,234	10,504
1807	12,598,236	55,277	72,135	11,474
1808	35,747,224	117,855	484,647	17,617
1809	21,717,310	10,603	287,720	24,268

II. FINANCE.—COMMERCIAL.

1047 II. FINANCE.
Commercial.

APPENDIX.
No. 27.

Chinese Produce
Imported;
1798-1831

1810	..	..	..	..	10,791,356	54,376	305,009	14,890
1811	..	..	..	..	21,231,849	81,397	316,616	9,630
1812	..	..	..	..	28,318,153	86,197	503,276	12,929
1813	..	..	..	..	The records of this year were destroyed by fire.			
1814	..	..	..	..	26,110,550	150,629	783,253	29,054
1815	..	..	..	..	25,602,214	216,199	896,797	19,474
1816	..	..	..	..	36,234,380	88,987	396,453	29,050
1817	..	..	..	..	31,467,073	103,367	564,226	35,703
1818	..	..	..	..	20,085,728	146,878	409,349	19,510
1819	..	..	..	..	23,759,413	141,325	523,852	55,585
1820	..	..	..	..	30,147,994	271,115	966,746	70,827
1821	..	..	..	..	30,731,105	275,110	569,062	39,054
1822	..	..	..	..	27,362,766	222,673	287,431	23,419
1823	..	..	..	..	29,046,885	392,717	412,076	73,935
1824	..	..	..	..	31,681,277	293,014	1,010,494	69,618
1825	..	..	..	..	29,345,699	142,676	392,998	75,963
1826	..	..	..	..	29,840,401	405,185	431,520	124,569
1827	..	..	..	..	39,746,147	208,287	99,698	97,752
1828	..	..	..	..	32,678,546	288,916	529,802	95,412
1829	..	..	..	..	30,544,382	606,444	919,555	103,077
1830	..	..	..	..	31,897,546	456,991	593,330	94,121
1831	..	..	..	..	31,648,922	476,692	857,171	89,796

WILLIAM IRVING,
Inspector Gen. of Imports and Exports.

Inspector General's Office,
Custom House, London.
31st July 1832.

APPENDIX,
No. 28.

Vessels and
Tonnage Entered
Inwards from
Places East of the
Cape of
Good Hope:
1817-1831.

APPENDIX,

A RETURN of the Number of Vessels and Amount of Tonnage annually Entered
British or Foreign) East of

YEARS.	LONDON.		BRISTOL.		LIVERPOOL.		HULL.		PORTSMOUTH.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1817	115	72,611	—	—	17	7,300	—	—	—	—
1818 . . .	147	85,795	1	484	33	14,627	2	1,072	1	750
1819	136	84,640	—	—	39	16,160	1	415	1	681
1820	121	76,161	1	427	22	9,283	2	750	1	510
1821	105	70,222	—	—	10	4,630	1	352	1	1,200
1822	90	60,752	—	—	11	4,836	—	—	1	2,200
1823	110	75,843	—	—	12	5,631	—	—	—	—
1824	133	79,329	—	—	14	6,111	—	—	1	677
1825	116	71,111	—	—	15	6,139	—	—	—	—
1826	175	93,773	—	—	17	6,692	—	—	—	—
1827	180	98,982	—	—	22	7,734	1	310	—	—
1828	207	101,258	—	—	28	9,764	—	—	—	—
1829	211	106,130	3	1,053	41	14,036	1	400	—	—
1830	217	108,219	3	1,110	35	11,875	1	147	—	—
1831	218	103,566	4	1,427	47	16,524	—	—	—	—

Office of Reg. Gen. of Shipping,
Custom-house, London,
4th August 1832.

II. FINANCE—COMMERCIAL.

1049

II. FINANCE
Commercial.

No. 28.

APPENDIX,
No. 28.

Inwards at Ports of the United Kingdom (specifying each Port), from places (whether the *Cape of Good Hope*.

Vessels and
Tonnage entered
Inwards from
Places East of the
Cape of
Good Hope,
1817-1831

COWES.		CHICHESTER.		GREENOCK.		GLASGOW.		LEITH.		PORT GLASGOW.		BELFAST.		TOTAL.	
Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.
—	—	—	—	2	775	—	—	—	—	—	—	—	—	134	80,686
—	—	—	—	3	1,382	—	—	—	—	—	—	—	—	187	104,110
—	—	—	—	5	2,016	—	—	—	—	1	356	—	—	183	104,268
—	—	—	—	3	1,178	—	—	—	—	1	435	—	—	151	88,744
—	—	—	—	1	582	—	—	1	260	—	—	—	—	119	77,246
—	—	—	—	1	381	—	—	—	—	—	—	—	—	103	68,169
—	—	—	—	1	381	—	—	—	—	—	—	—	—	123	81,855
—	—	—	—	1	381	—	—	1	260	—	—	—	—	150	86,758
1	61	—	—	—	—	—	—	—	—	—	—	—	—	132	77,311
—	—	—	—	4	1,218	—	—	—	—	—	—	—	—	196	101,683
1	366	1	234	3	930	—	—	3	969	2	714	—	—	213	110,239
—	—	—	—	5	1,644	2	293	1	142	4	1,419	—	—	247	114,520
—	—	—	—	3	1,065	1	259	1	385	4	1,214	1	240	266	124,782
—	—	—	—	1	240	—	—	2	446	4	1,348	—	—	263	123,385
—	—	—	—	9	2,316	—	—	1	442	6	1,868	—	—	285	126,143

JOHN COVEY,
Reg. Gen. of Shipping.

II FINANCE.
Commercial.

APPENDIX,
No. 28.
continued.

Vessels and
Tonnage entered
Inwards from
Places East of the
Cape of
Good Hope,
1817-1831

1050 APPENDIX TO REPORT FROM SELECT COMMITTEE.

VESSELS Entered Inwards from *New South Wales* and *Van Diemen's Land*, included
in the foregoing Return.

YEARS.			SHIPS.	TONS.	YEARS.			SHIPS.	TONS.
1817	..	..	—	—	1825	..	..	12	3,971
1818	..	..	2	559	1826	..	..	21	7,582
1819	..	..	1	443	1827	..	..	19	5,439
1820	..	..	3	1,291	1828	..	..	20	6,707
1821	..	..	4	1,349	1829	..	..	30	8,970
1822	..	..	5	1,706	1830	..	..	26	8,668
1823	..	..	11	3,883	1831	..	..	35	11,875
1824	..	..	12	3,968					

APPENDIX,
No. 29.

Ships and Tonnage
Entered Inwards
from Ports in China,
1793-4—1831-2

APPENDIX, No. 29.

NUMBER of Ships and Amount of Tonnage annually Entered Inwards in the United
Kingdom from Ports in *China*, commencing with 1793-94, to the present time.

YEARS.			SHIPS.	TONS.	YEARS.			SHIPS.	TONS.
1793-4	..	..	18	17,436	1813-14	..	..	19	24,466
1794-5	..	..	21	20,234	1814-15	..	..	21	24,890
1795-6	..	..	5	4,856	1815-16	..	..	26	33,075
1796-7	..	..	17	14,354	1816-17	..	..	27	28,032
1797-8	..	..	32	37,682	1817-18	..	..	15	20,000
1798-9	..	..	13	12,731	1818-19	..	..	16	21,210
1799-1800	..	..	10	12,840	1819-20	..	..	24	28,451
1800-1	..	..	22	27,407	1820-21	..	..	23	28,692
1801-2	..	..	21	24,531	1821-22	..	..	19	24,975
1802-3	..	..	24	25,994	1822-23	..	..	19	26,013
1803-4	..	..	17	22,279	1823-24	..	..	21	28,237
1804-5	..	..	18	24,191	1824-25	..	..	19	26,970
1805-6	..	..	15	19,100	1825-26	..	..	23	27,894
1806-7	..	..	9	11,083	1826-27	..	..	29	35,969
1807-8	..	..	24	31,797	1827-28	..	..	25	29,833
1808-9	..	..	15	19,290	1828-29	..	..	20	27,904
1809-10	..	..	13	17,472	1829-30	..	..	23	29,111
1810-11	..	..	15	18,984	1830-31	..	..	21	27,879
1811-12	..	..	19	25,324	1831-32	..	..	22	27,940
1812-13	..	..	21	27,227					

East-India Wharf.
10th August 1832.

E. LESLIE.

APPENDIX, No. 30.

APPENDIX,
No. 30.

Ships and Tonnage
Entered Inwards
and Cleared
Outwards, from and
to Countries
beyond the
Territories of the
Three Presidencies
1793 1831

A RETURN of the Number of SHIPS and the Amount of TONNAGE Entered Inwards and Cleared Outwards, from 1793 to 1831, from and to Countries beyond the Territories of the Three Presidencies; distinguishing the Number of Vessels and amount of Tonnage at the Ports of each Presidency, the Countries from whence the Vessels came and for which they cleared; and stating the Flag under which they sailed, so far as the same can be complied with; as follows:

(No. 1.)

A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Entered Inwards between the Years 1793 and 1831, at the Port of *Calcutta*, from Countries beyond the Territories of the Three Presidencies; distinguishing the Countries from whence the Vessels came, and stating the Flag under which they sailed.

(No. 2.)

A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Cleared Outwards between the Years 1793 and 1831, from the Port of *Calcutta*, to Countries beyond the Territories of the Three Presidencies; distinguishing the Countries for which the Vessels cleared out, and stating the Flag under which they sailed.

(No. 3.)

A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Entered Inwards, between the Years 1793 and 1831, at the Port of *Fort St. George* and the Ports subordinate thereto, from Countries beyond the Territories of the Three Presidencies; distinguishing the Countries from whence the Vessels came, and stating the Flag under which sailed.

(No. 4.)

A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Cleared Outwards, between the Years 1793 and 1831, from the Port of *Fort St. George* and the Ports subordinate thereto, to Countries beyond the Territories of the Three Presidencies; distinguishing the Countries for which the Vessels cleared out, and stating the Flag under which they sailed.

(No. 5.)

A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Entered Inwards, between the Years 1793 and 1831, at the Ports of *Bombay* and *Surat*, from Countries beyond the Territories of the Three Presidencies; distinguishing the Countries from whence the Vessels came, and stating the Flag under which they sailed.

(No. 6.)

A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Cleared Outwards, between the Years 1793 and 1831, from the Ports of *Bombay* and *Surat*, to Countries beyond the Territories of the Three Presidencies; distinguishing the Countries for which the Vessels cleared out, and stating the Flag under which they sailed.

East-India House,
15th August 1832.

J MILL,
Examiner of India Correspondence.

APPENDIX,

(1)—A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Entered Inwards, Three Presidencies; distinguishing the Countries from whence

1.										2.							
UNITED KINGDOM.										FRANCE.							
FROM ...	British.		American.		Danish.		Prussian.		TOTAL.		French.		British.		TOTAL.		
YEARS.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	
1793-4	{	There are not any Returns of the External							
1794-5		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1795-6	...	27	17,153	2	685	...	...	...	...	29	18,138	...	...	...	...	...
1796-7	...	47	27,534	...	...	...	...	...	...	47	27,534	...	...	...	...	...
1797-8	...	38	21,526	...	...	...	...	...	...	38	21,526	...	...	...	...	...
1798-9	...	12	8,471	...	...	1	4,000	...	...	13	8,921	...	...	...	...	...
1799-1800	...	21	10,139	7	2,177	...	...	1	658	29	12,974	...	...	...	...	...
1800-1	...	26	15,759	4	1,180	...	...	...	...	30	16,939	...	...	...	...	...
1801-2	...	27	16,087	...	...	...	...	...	...	27	16,087	...	...	...	...	...
1802-3	...	26	18,179	2	717	...	...	...	...	28	18,896	...	...	...	...	...
1803-4	...	14	8,891	...	...	...	...	...	...	14	8,891	...	...	...	...	...
1804-5	...	32	21,216	...	...	...	...	...	...	32	21,216	...	...	...	...	...
1805-6	...	24	17,587	...	...	...	...	...	...	24	17,587	...	...	...	...	...
1806-7	...	29	19,024	1	262	...	...	...	...	30	19,286	...	...	...	...	...
1807-8	...	27	18,620	...	...	...	...	...	...	27	18,620	...	...	...	...	...
1808-9	...	25	17,598	...	...	...	...	...	...	25	17,598	...	...	...	...	...
1809-10	...	21	15,463	...	...	...	...	...	...	21	15,463	...	...	...	...	...
1810-11	...	26	16,292	...	...	...	...	...	...	26	16,292	...	...	...	...	...
1811-12	...	43	30,358	...	...	...	...	...	...	43	30,358	...	...	...	...	...
1812-13	...	35	24,494	...	...	...	...	...	...	35	24,494	...	...	...	...	...
1813-14	...	29	19,806	...	...	...	...	...	...	29	19,806	...	...	...	...	...
1814-15 (A)	...	30	22,662	...	...	...	...	...	...	30	22,662	...	...	...	...	...
1815-16	...	52	30,717	...	...	...	...	...	...	52	30,717	...	...	...	...	...
1816-17 (B)	...	91	48,986	...	...	...	...	...	...	91	48,986	3	1,843	...	3	1,843
1817-18 (C)	...	132	67,187	...	...	...	...	...	...	132	67,187	10	5,007	...	10	5,007
1818-19 (D)	...	114	59,435	...	...	...	...	...	...	114	59,435	20	8,796	...	20	8,796
1819-20 (E)	...	67	34,962	...	...	...	...	...	...	67	34,962	12	4,347	...	12	4,347
1820-21	...	68	38,530	...	...	...	...	...	...	68	38,530	9	3,746	...	9	3,746
1821-22 (F)	...	53	30,839	...	...	...	...	...	...	53	30,839	12	4,826	...	12	4,826
1822-23	...	59	38,494	...	...	...	...	...	...	59	38,494	15	5,469	...	15	5,469
1823-24	...	57	32,844	...	...	...	...	...	...	57	32,844	5	1,371	...	5	1,371
1824-25 (G)	...	64	40,874	...	...	...	...	...	...	64	40,874	11	4,316	...	11	4,316
1825-26 (H)	...	83	49,529	...	...	...	...	...	...	83	49,529	12	3,824	...	12	3,824
1826-27 (I)	...	84	47,465	...	...	...	...	...	...	84	47,465	10	4,077	...	10	4,077
1827-28	...	102	51,924	102	51,924	18	5,535	1	273	19	5,808
1828-29 (K)	...	106	57,304	106	57,304	29	8,807	1	374	30	9,181
1829-30	...	78	41,903	78	41,903	20	7,078	20	7,078
1830-31	
The Returns of the External Commerce of Bengal for																	

The Returns of the External Commerce of Bengal for

No. 30.

between the Years 1793 and 1831, at the Port of *Calcutta* from Countries beyond the Territories of the the Vessels came, and stating the Flag under which they sailed.

3.								4.								5.			
AMERICA.								HAMBURGH.								HOLLAND.			
American.		British.		Portuguese.		TOTAL.		Hamburgh.		British.		American.		Genoese.		TOTAL.		Dutch.	
Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons
Commerce of Bengal for these Years								...	...	...	...	...	...	...	...	...	...	...	...
18	4,541	...	...	...	...	18	4,541	...	...	...	...	8	3,456	1	350	9	3,806	...	...
21	6,536	...	...	...	...	21	6,536	...	...	...	...	1	295	...	...	1	295	...	...
18	4,564	...	...	...	...	18	4,564	3	1,328	...	...	1	300	...	...	4	1,628	...	...
14	4,164	...	...	...	...	14	4,164	4	1,410	...	...	...	...	...	...	4	1,419	...	...
10	2,596	...	...	...	...	10	2,596	2	600	...	...	1	250	...	...	3	850	...	...
17	5,491	...	...	...	...	17	5,491	...	...	...	...	2	373	...	...	2	373	...	...
17	4,406	...	...	...	...	17	4,406	...	...	...	...	...	...	...	...	...	...	...	...
19	5,046	...	...	...	...	19	5,046	...	...	...	...	...	...	...	...	...	...	...	...
14	4,302	...	...	...	...	14	4,302	...	...	...	...	...	...	...	...	...	...	...	...
3	707	...	...	...	...	3	707	...	...	...	...	...	...	...	...	...	...	...	...
10	2,764	...	...	...	...	10	2,764	...	...	...	...	...	...	...	...	...	...	...	...
35	10,280	...	...	...	...	35	10,280	...	...	...	...	...	...	...	...	...	...	...	...
19	6,462	...	...	...	...	19	6,462	...	...	...	...	...	...	...	...	...	...	...	...
1	355	...	...	...	...	1	355	...	...	...	...	...	...	...	...	...	...	...	...
17	4,676	...	...	...	...	17	4,676	...	...	...	...	...	...	...	...	...	...	...	...
16	4,928	...	...	1	139	17	5,067	...	...	...	...	...	...	...	...	...	...	...	...
3	839	...	...	...	...	3	839	...	...	...	...	...	...	...	...	...	...	...	...
2	668	...	...	...	...	2	668	...	...	...	...	...	...	...	...	...	...	...	...
1	75	...	...	...	...	1	75	...	...	...	...	...	...	...	...	...	...	...	...
...
22	7,225	...	...	...	...	22	7,225	...	...	...	...	...	...	...	...	...	...	...	...
41	14,759	...	...	...	...	41	14,759	...	...	...	...	...	...	...	...	...	2	860	...
40	14,233	...	...	...	...	40	14,233	...	...	...	...	...	...	...	...	...	...	...	...
54	16,498	...	...	...	...	54	16,498	...	...	...	...	...	...	...	...	...	4	1,107	...
24	6,977	...	...	...	...	24	6,977	...	...	...	...	...	...	...	...	...	2	406	...
13	4,320	...	...	...	...	13	4,320	...	...	...	...	...	...	...	...	...	...	...	...
19	5,568	...	...	...	...	19	5,568	...	...	...	...	...	...	...	...	...	...	...	...
15	4,605	...	...	...	...	15	4,605	...	...	...	...	...	...	...	...	...	...	...	...
7	2,117	...	...	...	...	7	2,117	...	...	...	...	...	...	...	...	...	...	...	...
7	2,029	...	...	...	...	7	2,029	...	...	...	...	...	...	...	...	...	...	...	...
17	5,131	2	627	...	...	19	5,761	...	...	...	...	...	...	...	...	...	...	...	...
7	1,983	...	...	...	...	7	1,983	...	...	1	216	...	...	...	...	1	216	...	...
10	2,788	...	...	...	...	10	2,788	...	...	1	254	...	...	...	...	1	254	...	...
11	3,526	1	328	...	...	12	3,854	...	...	4	881	...	...	...	...	4	881	...	...
13	3,868	...	...	...	...	13	3,868	...	...	1	262	...	...	...	...	1	262	...	...
1830-31 have not yet been received								...	...	...	...	...	...	...	...	...	...	...	...

(1)—Number of SHIPS and Amount of TONNAGE Entered Inward:

(continued)		6.								7.		8.		9.					
FROM ...		COPENHAGEN.								SWEDEN.		CADIZ		GIBRALTAR and MALTA.					
FLAGS.		Danish.		American.		Indian.		TOTAL.		Swedish.		Spanish.		British.		French.		TOTAL.	
YEARS.		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793-4	1	...	...	...	...	...	...	...	...	...	...	...	...	There are not any Returns of the External					
1794-5	5	...	...	...	...	...	...	...	...	...	...	...	...
1795-6	6	8	4,090	...	...	...	...	8	4,090	...	...	...	...	...	...	...	...	...	...
1796-7	7	6	3,120	...	...	...	...	6	3,120	...	...	...	...	...	...	...	...	...	...
1797-8	8	3	1,600	...	...	...	...	3	1,600	...	...	...	...	...	...	...	...	...	...
1798-9	9	4	2,120	...	...	...	...	4	2,120	...	...	...	...	...	...	...	...	...	...
1799-1800	...	8	4,425	...	...	...	...	8	4,425	...	...	...	...	...	...	...	...	...	...
1800-1	1	1	680	1	80	...	...	2	680	...	...	...	...	...	...	...	...	...	...
1801-2	2	1	450	...	...	...	...	1	450	...	...	...	...	...	...	...	...	...	...
1802-3	3	3	2,050	1	315	...	...	4	2,365	...	...	1	750	...	...	...	...	...	...
1803-4	4	3	1,630	...	...	...	...	3	1,630	...	...	...	...	...	...	...	...	...	...
1804-5	5	1	460	...	...	...	...	1	460	...	...	1	716	...	...	...	...	...	...
1805-6	6	2	575	...	...	...	...	2	575	...	...	...	...	...	...	...	...	...	...
1806-7	7	3	1,341	1	240	...	...	4	1,571	...	...	...	...	...	...	...	...	...	...
1807-8	8	2	580	1	150	...	...	3	730	...	...	...	...	...	...	...	...	...	...
1808-9	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1809-10	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1810-11	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1811-12	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1812-13	13	...	...	...	...	...	...	...	...	...	...	1	450	...	...	...	...	...	...
1813-14	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1814-15 (A)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1815-16	16	1	300	...	...	...	...	1	300	...	...	1	604	...	...	...	...	...	...
1816-17 (B)	17	1	300	...	...	...	...	1	300	...	...	...	...	...	...	...	...	...	...
1817-18 (C)	18	3	1,240	...	...	...	...	3	1,240	...	...	...	...	3	705	...	...	3	705
1818-19 (D)	19	6	2,946	...	...	...	...	6	2,946	...	...	1	1,053	5	1,758	...	...	5	1,758
1819-20 (E)	20	2	836	...	...	...	...	2	836	...	...	...	...	5	2,727	...	...	5	2,727
1820-21	21	1	320	...	...	...	...	1	320	...	...	...	...	2	1,328	...	...	2	1,328
1821-22 (F)	22	1	353	...	...	...	...	1	353	...	...	...	...	...	...	...	...	...	...
1822-23	23	1	468	...	...	...	...	1	468	...	...	...	...	...	...	...	...	...	...
1823-24	24	1	150	...	...	...	...	1	150	...	...	...	...	1	390	...	...	1	390
1824-25 (G)	25	1	468	...	...	...	...	1	468	1	360	...	...	...	...	...	...	...	...
1825-26 (H)	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1826-27 (I)	27	...	...	...	...	...	...	...	...	1	300	...	...	1	155	...	...	1	155
1827-28	28	...	...	...	...	...	...	...	...	3	595	...	...	...	...	...	...	...	...
1828-29 (K)	29	...	...	...	...	...	...	...	...	1	468	...	...	...	...	...	...	...	...
1829-30	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1830-31	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The Returns of the External Commerce of Bengal																			

* In the registers from which this Account has been compiled, the

II.—FINANCE.—COMMERCIAL.

1055

at the Port of Calcutta between 1793 and 1831—continued.

10.

11

PORTUGAL.								BRAZILS.								TOTAL.	
Portuguese.		British *		American.		TOTAL.		Portuguese.		British.		American.		Spanish.		TOTAL.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years.								...	...	...	...	...	...	...	...	...	...
1	500	...	...	1	500	2	1,000	...	...	...	...	...	...	...	...	...	...
2	950	...	...	...	...	2	950	...	...	...	...	...	...	...	...	...	...
2	900	...	...	1	500	3	1,400	...	...	...	...	...	...	...	...	...	...
1	200	...	...	...	...	1	200	...	...	...	...	...	...	...	...	...	...
6	3,550	...	...	1	163	7	3,713	...	...	...	...	...	...	...	...	...	...
...
2	1,050	...	...	...	...	2	1,050	...	...	...	...	...	...	...	...	...	...
4	2,000	...	...	1	397	5	2,397	...	...	...	...	...	...	...	...	...	...
3	1,700	...	...	1	298	4	1,998	...	...	...	...	...	...	...	...	...	...
2	900	...	...	1	234	3	1,134	...	...	...	...	...	...	...	...	...	...
4	1,370	...	...	2	362	6	1,732	...	...	...	...	...	...	...	...	...	...
5	2,030	...	...	1	187	6	2,217	...	...	...	...	...	...	...	...	...	...
2	1,400	...	...	1	310	3	1,710	...	...	...	...	...	...	...	...	...	...
...
3	1,250	...	...	...	...	3	1,250	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	4	1,350	...	...	...	...	...	...	4	1,350
...	...	...	...	...	...	...	...	5	2,205	...	...	1	380	...	...	6	2,585
12	*5,380	...	...	...	...	12	5,380	...	...	...	...	...	...	...	...	...	...
2	1,087	...	...	...	...	2	1,087	2	625	...	...	...	...	...	...	2	625
8	3,850	...	...	...	...	8	3,850	5	1,750	1	340	...	...	1	196	7	2,286
7	3,780	...	...	...	...	7	3,780	4	1,095	...	...	...	...	...	...	4	1,095
9	4,450	...	...	...	...	9	4,450	6	1,280	...	...	...	...	1	298	7	1,578
5	2,240	...	...	...	...	5	2,240	5	1,360	...	...	...	...	...	...	5	1,360
5	2,888	...	...	...	...	5	2,888	6	2,340	1	376	...	...	...	...	7	2,716
5	2,480	...	...	...	...	5	2,480	3	1,730	...	...	...	...	...	...	3	1,730
6	3,902	...	...	...	...	6	3,902	3	2,145	...	...	...	...	...	...	3	2,145
2	1,250	...	...	...	...	2	1,250	2	463	...	...	...	...	...	...	2	463
5	2,260	...	...	...	...	5	2,260	2	780	...	...	...	...	...	...	2	780
...	...	...	...	...	...	...	...	3	1,210	...	...	...	...	...	...	3	1,210
2	660	...	...	...	...	2	660	3	942	...	...	...	...	...	...	3	942
2	675	...	...	...	...	2	675	1	400	...	...	...	...	...	...	1	400
2	715	...	...	...	...	2	715	2	750	...	...	...	...	...	...	2	750
1	360	...	...	...	...	1	360	2	800	...	...	...	...	...	...	2	800
...
1	116	...	...	...	...	1	116	...	...	...	...	...	...	...	...	...	...
for 1830-31 have not yet been received.								...	...	...	...	...	...	...	...	...	...

Lisbon and Brazilian Tonnage for this year are combined.

(continued)

(1)—Number of SHIPS and Amount of TONNAGE Entered Inwards

12

(continued)

FROM YEARS	SOUTH AMERICA											
	British.		French		American		Spanish		Chile.		TOTAL.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793-4	1	...	...	...	...	...	...	...	There are not any Returns of the External			
1794-5	1	...	...	...	...	...	...	...	...	...	...	...
1795-6	...	...	...	...	...	...	...	...	...	...	...	...
1796-7	...	...	...	...	...	...	...	...	...	...	...	...
1797-8	...	...	...	...	...	...	...	...	...	...	...	...
1798-9	...	...	...	...	...	...	...	...	...	...	...	...
1799-1800	...	...	...	...	...	...	...	...	...	...	...	...
1800-1	...	...	...	...	...	...	...	...	...	...	...	...
1801-2	...	...	...	...	...	...	...	...	...	...	...	...
1802-3	...	...	...	...	...	...	...	...	...	...	...	...
1803-4	...	...	...	...	...	...	...	...	...	...	...	...
1804-5	...	...	...	...	...	...	...	...	...	...	...	...
1805-6	...	...	...	...	...	...	...	...	...	...	...	...
1806-7	...	...	...	...	...	...	...	...	...	...	...	...
1807-8	...	...	...	...	...	...	...	...	...	...	...	...
1808-9	...	...	...	...	...	...	...	...	...	...	...	...
1809-10	...	...	...	...	...	...	...	...	...	...	...	...
1810-11	...	...	...	...	...	...	...	...	...	...	...	...
1811-12	...	...	...	...	...	...	...	...	...	...	...	...
1812-13	...	...	...	...	...	...	...	...	...	...	...	...
1813-14	...	...	...	...	...	...	...	...	...	...	...	...
1814-15 (A)	...	...	...	A.	...	...	...	...	...	...	...	...
1815-16	...	...	...	...	...	...	...	...	...	...	...	...
1816-17 (B)	...	...	...	...	...	...	...	...	...	...	1	450
1817-18 (C)	1	450	...	...	...	...	...	...	...	...	2	1,150
1818-19 (D)	...	...	...	...	...	...	2	1,150	...	...	5	2,095
1819-20 (E)	4	1,699	...	...	...	...	1	396	...	...	4	1,601
1820-21	4	1,601	...	...	...	...	...	...	...	...	5	1,723
1821-22 (F)	5	1,723	...	...	...	...	...	...	...	...	6	2,168
1822-23	6	2,168	...	...	...	...	...	...	...	...	11	4,173
1823-24	11	4,173	...	...	...	...	...	...	...	...	12	3,766
1824-25 (G)	12	3,766	...	...	...	...	...	...	...	...	4	1,110
1825-26 (H)	3	703	...	...	1	407	...	...	...	...	4	1,358
1826-27 (I)	3	850	...	...	...	...	...	...	1	408	1	282
1827-28	1	282	...	...	...	...	...	...	...	...	4	969
1828-29 (K)	2	500	2	469	...	...	...	...	...	...	3	828
1829-30	2	535	1	293	...	...	...	...	...	...	...	...
1830-31	...	...	...	...	...	...	...	...	...	...	...	...

The Returns of the External Commerce of Bengal

at the Port of Calcutta, between 1793 and 1831—continued.

13.													14.					
CHINA.													ST. HELENA.					
British.		French.		American.		Danish.		Portuguese.		Indian.		TOTAL.		British.				
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.			
Commerce of Bengal for these Years.												
5	2,773	...	...	...	...	...	...	2	500	...	...	7	3,273	...	...	
4	2,200	...	...	...	...	...	...	1	350	...	...	5	2,550	...	...	
5	2,930	...	...	...	...	1	150	4	820	...	...	10	3,870	...	...	
7	4,546	...	...	...	...	...	...	3	1,000	...	...	10	5,546	...	...	
2	530	...	...	...	...	...	...	3	950	...	...	5	1,500	...	...	
2	1,200	...	...	...	...	...	...	3	450	...	...	7	1,650	...	...	
...	...	...	...	...	...	...	...	4	900	...	...	4	900	...	...	
12	6,955	...	...	...	...	...	...	7	2,250	...	...	19	8,305	1	325
11	6,203	...	...	...	...	...	...	2	450	...	...	13	6,743	1	300
5	3,330	...	...	...	...	...	...	4	1,250	...	...	9	4,630	...	...	
12	7,131	...	...	...	...	...	...	6	2,150	...	...	18	9,331	3	2,190
31	15,339	...	...	...	...	...	...	5	1,900	...	...	36	17,239	...	...	
17	9,908	...	...	...	...	...	...	3	1,150	...	...	20	11,058	...	...	
11	7,922	...	...	2	478	...	...	6	2,025	...	...	19	9,525	...	...	
9	6,048	...	...	...	...	...	...	3	1,225	...	...	12	7,273	...	...	
9	5,323	...	...	...	...	...	...	3	1,105	...	...	12	6,428	...	...	
9	4,337	...	...	1	180	...	...	3	1,175	2	1,600	15	7,292	...	...	
7	5,749	...	...	...	...	...	...	4	1,495	1	450	12	7,694	...	...	
8	4,917	...	...	...	...	...	...	4	900	...	...	12	5,817	...	...	
8	4,608	...	...	...	...	...	...	3	870	...	...	11	5,478	...	...	
6	2,602	...	...	...	...	...	...	9	2,746	...	...	15	5,348	...	...	
20	11,387	...	...	...	...	...	...	8	2,504	...	...	28	13,891	...	...	
23	13,617	...	...	...	...	...	...	6	2,081	...	...	29	15,701	...	...	
17	9,068	...	...	...	...	...	...	5	1,500	...	...	22	10,568	...	...	
6	3,173	...	...	...	...	...	...	4	1,690	...	...	10	4,863	...	...	
12	5,439	...	...	...	...	1	242	3	1,010	...	...	16	6,691	...	...	
5	2,953	...	...	...	...	...	...	8	3,070	...	...	13	6,023	...	...	
7	3,724	...	...	...	...	...	...	8	2,900	...	...	15	6,624	...	...	
9	4,740	...	...	...	...	...	...	2	770	...	...	11	5,510	...	...	
8	3,734	...	...	...	...	...	...	3	1,120	...	...	11	4,854	...	...	
15	6,042	...	...	...	...	...	...	2	780	...	...	17	6,822	...	...	
13	5,299	...	...	...	...	...	...	1	300	...	...	14	5,599	...	...	
17	5,619	...	...	...	...	...	...	1	340	...	...	18	6,159	...	...	
13	5,211	1	717	...	...	...	...	...	...	...	...	14	5,928	...	...	
15	4,654	...	...	...	...	1	201	...	...	...	...	16	4,855	...	...	
for 1830-31 have not yet been received.														

(continued)

at the Port of Calcutta, between 1793 and 1831—continued.

17.										18.										19.									
MANILLA.										NEW SOUTH WALES										CAPE OF GOOD HOPE									
Danish		Hamburgh		Portuguese		TOTAL		British		Danish		TOTAL		British		American		Danish		Hamburgh		TOTAL							
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.						
Commerce of Bengal for these Years.																													
1	200					1	200	3	850			3	850																
1	150					2	460	1	651			1	651																
1	250					1	250																						
1	850					3	850	1	350			1	350	2	600							2	600						
														1	232							1	232						
1	200					1	200	1	1,812	1	150	5	1,962	2	819	1	195	2	1,350			5	2,304						
				1	250	1	250	2	600			2	600	1	1,670	2	511					6	2,181						
2	585					2	585							5	2,717	4	1,608	1	500			10	4,325						
																1	95	1	330			2	825						
				1	100	2	616													1	400	1	400						
1	750			1	150	2	1,200									3	671					3	671						
														3	1,137							3	1,137						
														1	230							1	230						
						1	150	1	130			1	130	1	230							1	230						
						6	1,755	1	146			1	146																
						4	1,270	6	2,097			6	2,097	1	430							1	430						
								5	1,238			5	1,238	1	380							1	380						
						2	440	8	2,011			8	2,011	2	610	1	220					3	830						
				2	620	5	1,124	3	566			3	566	2	613							2	613						
						1	250	4	777			4	777	5	1,852							5	1,852						
						3	424	4	645			4	645	4	1,335							4	1,335						
						2	479	7	1,760			7	1,760	5	1,993							5	1,993						
						7	1,919	3	987			3	987	10	2,553							10	2,553						
						1	450	7	2,106			7	2,106	2	525							2	525						
						1	267	9	3,150			9	3,150	3	2,083							5	2,183						
						2	910	10	2,759			10	2,759	3	576							3	576						
						1	173	4	1,537			4	1,537	2	561							2	561						
						2	520	7	2,605			7	2,605	6	2,045							6	2,045						
						1	184	4	1,242			4	1,242	5	1,469							5	1,469						
						4	1,242	4	1,764			4	1,764	4	872							4	872						
1	113					2	293	6	1,535			6	1,535	1	225							1	225						
						1	383	3	1,243			3	1,243	4	1,212							4	1,212						
						1	320	4	1,160			4	1,160	2	277							2	277						
						1	303	4	1,419			4	1,419																
								7	2,543			7	2,543																
for 1830-31 have not yet been received																													

1060 APPENDIX TO REPORT FROM SELECT COMMITTEE.

(1.)—Number of SHIPS and Amount of TONNAGE Entered Inwards

FROM ...		NEW GUINEA		MOSAMBIQUE.						J A V A.											
FLAGS		British.		Portuguese.		Dutch.		TOTAL		Dutch.		British.		French.		American.		Danish.		TOTAL.	
YEARS		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793-4	}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1794-5		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1795-6	...	...	...	1	300	...	...	1	300	...	...	...	...	...	...	...	...	...	...	...	...
1796-7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1797-8	...	2	400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1798-9	...	2	400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1799-1800	...	1	200	1	115	...	...	1	115	...	...	...	...	...	...	...	...	...	...	...	...
1800-1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1801-2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1802-3	...	...	...	...	...	...	...	...	...	...	...	1	225	...	...	...	...	...	...	1	225
1803-4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	450	...	...	1	450
1804-5	...	...	...	...	...	...	...	...	...	...	...	1	192	...	...	7	2,165	...	...	8	2,357
1805-6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	1,459	...	...	6	1,459
1806-7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	275	1	300	2	575
1807-8	...	...	...	...	...	...	...	...	...	...	...	2	640	...	...	...	...	...	...	2	640
1808-9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1809-10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1810-11	...	...	...	...	...	...	...	...	...	...	...	1	350	...	...	...	...	...	...	1	350
1811-12	...	...	...	...	...	...	...	...	...	...	...	19	8,078	...	...	...	...	...	...	19	8,078
1812-13	...	...	...	...	...	...	...	...	...	...	...	10	2,782	...	...	...	...	...	...	10	2,782
1813-14	...	...	...	1	220	...	...	1	220	...	...	19	5,760	...	...	...	...	...	...	19	5,760
1814-15 (A)	...	...	...	1	220	...	...	1	220	...	...	10	2,489	...	...	...	...	...	...	10	2,489
1815-16	...	...	...	...	...	...	...	...	...	...	...	17	5,999	...	...	1	380	...	...	18	6,379
1816-17 (B)	...	...	...	...	...	...	...	...	...	...	...	31	12,516	...	...	...	...	...	...	31	12,516
1817-18 (C)	...	...	...	1	220	...	...	1	220	1	85	11	2,023	...	...	...	...	...	...	12	2,708
1818-19 (D)	...	...	...	...	1	523	1	523	...	...	...	10	3,023	...	...	...	...	...	...	10	3,023
1819-20 (E)	...	...	...	...	...	...	...	...	...	1	200	9	2,123	...	...	...	...	...	...	10	2,323
1820-21	...	...	...	...	...	...	...	...	...	...	...	7	1,741	...	...	...	...	...	...	7	1,741
1821-22 (F)	...	...	...	...	1	490	1	490	1	300	18	5,351	...	...	...	...	...	...	...	19	5,651
1822-23	...	...	...	...	1	250	1	250	3	1,140	14	6,701	1	300	...	...	...	...	...	18	8,141
1823-24	...	...	...	...	...	...	...	...	...	1	320	10	3,738	...	...	...	...	...	...	11	4,058
1824-25 (G)	...	...	...	...	...	...	...	...	...	...	...	4	1,537	...	...	...	...	...	...	4	1,537
1825-26 (H)	...	...	...	...	...	...	...	...	...	3	878	7	2,371	...	...	...	...	...	...	10	3,149
1826-27 (I)	...	...	...	...	...	...	...	...	...	7	2,056	5	1,019	...	...	...	...	...	...	12	3,105
1827-28	...	...	...	...	...	...	...	...	...	2	460	4	935	...	...	...	...	...	...	6	1,395
1828-29	...	...	...	...	...	...	...	...	...	2	460	1	255	...	...	...	...	...	...	3	715
1829-30	...	...	...	...	...	...	...	...	...	2	444	1	174	...	...	...	...	...	...	3	618
1830-31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The Returns of the External Commerce of Bengal																					

The Returns of the External Commerce of Bengal

II.—FINANCE.—COMMERCIAL.

1061

at the Port of *Calcutta* between 1793 and 1831—*continued*.

23.

24

AMBOYNA.

SUMATRA.

British.		British.		French.		American.		Danish.		Dutch.		Portuguese.		Indian.		TOTAL.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years						...	...	...	...	...	...	...	...	...	...	...	...
...	...	3	857	...	...	1	136	...	...	...	...	...	...	...	...	4	993
...	...	1	100	...	...	...	...	1	250	...	...	...	...	...	...	2	350
...	...	5	2,130	...	...	1	200	1	250	...	...	...	...	...	...	7	2,580
...	...	5	1,513	...	...	...	...	1	310	...	...	...	...	...	...	6	1,823
...	...	5	1,270	...	...	...	...	...	...	...	...	...	...	...	...	5	1,270
...	...	5	1,760	...	...	1	226	...	...	...	...	...	...	...	...	6	1,986
...	...	4	850	...	...	...	...	...	...	...	...	...	...	...	...	4	850
...	...	9	2,940	...	...	1	105	...	...	...	...	...	...	...	...	10	3,045
...	...	10	3,326	...	...	1	350	...	...	...	...	...	...	...	...	11	3,676
...	...	7	2,140	...	...	4	927	1	200	...	...	...	...	...	...	12	3,267
...	...	8	2,035	...	...	...	...	...	...	...	...	...	...	1	250	9	2,805
...	...	6	2,159	...	...	...	...	...	...	...	...	...	...	...	...	6	2,159
...	...	1	1,465	...	...	...	...	...	...	...	...	...	...	...	...	4	1,465
...	...	8	2,082	...	...	...	...	...	...	...	...	...	...	...	...	8	2,082
...	...	1	500	...	...	...	...	...	...	...	...	...	...	...	...	1	500
2	750	9	2,339	...	...	...	...	...	...	...	...	...	...	1	60	10	2,390
1	500	8	1,760	...	...	...	...	...	...	...	...	...	...	...	...	8	1,760
...	...	9	2,525	...	...	...	...	...	...	...	...	...	...	...	...	9	2,525
1	277	17	4,211	...	...	...	...	...	...	...	...	...	...	...	...	17	4,211
1	197	15	3,776	...	...	...	...	...	...	...	...	...	...	...	...	15	3,776
1	203	10	2,588	...	...	1	317	...	...	...	...	...	...	...	...	11	2,905
3	705	8	2,421	...	...	...	...	...	...	...	...	...	...	...	...	8	2,421
5	1,388	9	1,871	...	...	...	...	...	...	...	...	...	...	...	...	9	1,871
...	...	11	2,852	...	...	...	...	...	...	...	...	...	...	...	...	11	2,852
...	...	11	2,082	...	...	...	...	...	...	1	45	...	...	...	...	12	2,127
...	...	7	1,680	...	...	...	...	...	...	1	205	...	...	...	...	8	1,885
...	...	5	1,731	...	...	...	...	...	...	...	...	...	...	...	...	5	1,731
...	...	5	1,607	...	...	...	...	...	...	2	290	...	...	...	...	7	1,906
...	...	12	3,074	...	...	...	...	...	...	1	149	...	...	...	...	13	3,223
...	...	7	1,708	...	...	...	...	...	...	...	...	...	...	...	...	7	1,708
...	...	8	3,512	...	...	...	...	...	...	1	149	...	...	...	...	9	3,661
...	...	4	662	...	...	...	...	...	...	1	40	...	...	...	...	5	702
...	...	7	1,467	...	...	...	...	...	...	...	...	...	...	...	...	7	1,467
...
...	...	2	690	...	...	...	...	...	...	1	119	1	295	...	...	4	1,104
for 1830-31 have not yet been received.						...	...	...	...	...	...	...	...	...	...	...	...

1062 APPENDIX TO REPORT FROM SELECT COMMITTEE.

(1)—Number of SHIPS and Amount of TONNAGE Entered Inwards

continued)

25.

FROM ...		PENANG and EASTWARDS.															
FLAGS		British.		French		American		Danish		Dutch.		Portuguese.		Indian		TOTAL	
YEARS		Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons	Ships	Tons
1793-4	}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1794-5		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1795-6	...	31	8,057	...	...	...	...	1	600	...	...	...	...	...	...	32	8,657
1796-7	...	28	7,155	...	...	2	470	2	300	...	...	1	150	...	...	33	8,075
1797-8	...	17	5,000	...	...	...	...	1	850	...	...	...	...	1	475	21	6,325
1798-9	...	17	4,471	...	...	1	240	2	700	...	...	1	100	...	...	21	5,511
1799-1800	...	26	6,032	...	...	...	...	...	...	...	...	...	...	1	150	27	6,182
1800-1	...	30	8,274	...	...	2	400	1	260	...	...	2	850	...	...	35	9,784
1801-2	...	20	5,711	...	...	...	...	...	...	...	...	4	1,200	1	550	25	7,464
1802-3	...	31	7,905	...	...	...	...	...	...	...	...	...	...	1	150	32	8,115
1803-4	...	31	12,017	...	...	1	224	...	...	...	...	4	1,300	...	...	39	13,571
1804-5	...	29	9,173	...	...	2	415	2	170	...	...	1	200	...	...	34	9,688
1805-6	...	35	12,825	...	...	...	...	1	150	...	...	3	1,000	...	...	39	13,975
1806-7	...	32	11,107	...	...	1	290	...	...	...	...	4	1,010	2	685	39	16,392
1807-8	...	28	7,542	...	...	...	...	...	...	...	...	...	...	2	531	30	8,073
1808-9	...	27	6,600	...	...	...	...	...	...	...	...	...	...	2	700	29	7,560
1809-10	...	29	9,324	...	...	1	250	...	...	...	...	...	...	1	400	31	9,974
1810-11	...	24	6,201	...	...	...	...	...	...	...	...	1	300	1	550	26	7,111
1811-12	...	33	9,064	...	...	...	...	...	...	...	...	2	500	5	1,750	40	11,914
1812-13	...	27	7,197	...	...	...	...	...	...	...	...	...	...	...	...	27	7,197
1813-14	...	30	9,605	...	...	...	...	...	...	...	...	1	200	2	480	33	10,285
1814-15 (A)	...	12	3,572	...	...	...	...	...	...	...	...	...	...	...	...	12	3,572
1815-16	...	21	4,619	...	...	...	...	...	...	...	...	...	...	...	...	21	4,619
1816-17 (B)	...	21	6,137	...	...	...	...	...	...	...	...	...	...	1	350	22	6,787
1817-18 (C)	...	15	2,851	...	...	...	...	...	...	...	...	...	...	1	70	16	2,921
1818-19 (D)	...	20	4,201	...	...	...	...	...	...	...	...	...	...	3	950	23	5,151
1819-20 (E)	...	23	8,534	...	...	...	...	...	...	...	...	...	...	1	300	24	8,834
1820-21	...	16	3,901	...	...	...	...	...	...	...	...	1	150	1	200	18	4,251
1821-22 (F)	...	18	6,134	...	...	...	...	...	...	...	...	...	...	1	550	19	6,684
1822-23	...	20	6,159	...	...	...	...	...	...	...	...	...	...	...	...	20	6,159
1823-24	...	17	4,938	...	...	...	...	...	...	1	75	...	...	...	...	18	5,013
1824-25 (G)	...	18	5,063	...	...	...	...	...	...	...	...	...	...	1	250	19	5,313
1825-26 (H)	...	14	2,681	...	...	...	...	...	...	...	...	...	...	2	700	13	3,381
1826-27 (I)	...	17	5,515	...	...	...	...	...	...	...	...	...	...	1	150	18	5,665
1827-28	...	14	3,721	...	...	...	...	...	...	...	...	...	...	1	350	15	4,071
1828-29 (K)	...	21	4,254	...	...	...	...	...	...	...	...	...	...	...	...	21	4,254
1829-30	...	19	5,317	...	...	...	...	...	...	...	...	...	...	1	400	20	5,717
1830-31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The Returns of the External Commerce of Bengal																	

The Returns of the External Commerce of Bengal

at the Port of Calcutta, between 1793 and 1891—continued.

26.

TABLE

British.		French.		American.		Danish.		Dutch.		Portuguese.		Indian.		TOTAL.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years						...	...	...	...	...	...	...	...	...	...
21	5,855	...	...	...	...	...	...	...	...	...	...	2	200	23	6,105
8	3,050	...	...	...	...	1	700	...	...	...	...	3	610	12	4,360
9	1,400	...	...	...	...	...	...	...	...	...	...	1	980	13	1,380
10	2,030	...	...	...	...	...	...	...	...	...	...	2	200	12	3,130
13	1,705	...	...	...	...	...	...	...	...	...	...	1	1,050	17	4,755
13	3,280	...	...	...	...	3	920	...	...	...	...	5	1,250	21	5,450
18	1,301	...	...	...	...	...	...	...	...	...	...	3	1,210	21	6,511
16	7,121	1	460	...	...	...	...	...	...	...	...	2	230	19	7,811
22	6,571	...	...	...	...	...	...	...	...	1	80	6	1,190	29	10,111
11	3,210	...	...	...	...	1	200	...	...	...	...	2	233	14	3,643
12	1,212	...	...	...	...	2	589	...	...	...	...	5	2,100	19	6,901
12	1,855	...	...	1	310	...	...	...	...	...	...	10	1,320	23	5,515
14	3,270	...	...	...	...	...	...	...	...	...	...	5	670	19	3,940
13	3,633	...	...	...	...	...	...	...	...	...	...	7	1,395	25	5,248
7	2,605	...	...	...	...	...	...	...	...	...	...	7	1,215	11	3,880
15	3,390	...	...	...	...	...	...	...	...	1	300	1	425	20	4,115
7	2,188	...	...	...	...	...	...	...	...	1	300	6	2,320	14	5,108
16	4,816	...	...	...	...	...	...	...	...	...	...	7	1,795	23	6,641
14	1,784	...	...	...	...	...	...	...	...	...	...	7	1,150	21	6,231
23	5,025	...	...	...	...	...	...	...	...	...	...	9	2,700	32	7,725
24	5,535	...	...	...	...	...	...	...	...	...	...	12	2,150	36	7,685
23	6,338	...	...	...	...	...	...	...	...	...	...	7	2,090	30	8,428
32	11,936	...	...	...	...	...	...	...	...	...	...	11	2,075	43	14,011
11	3,709	...	...	...	...	...	...	...	...	...	...	1	150	12	3,859
6	2,626	...	...	...	...	...	...	...	...	...	...	4	600	10	3,226
15	7,452	...	...	...	...	...	...	...	...	...	...	4	1,050	19	8,502
23	9,560	...	...	...	...	...	...	...	...	...	...	2	588	25	10,148
22	9,561	...	...	...	...	...	...	...	...	...	...	...	...	22	9,561
14	6,031	...	...	...	...	...	...	...	...	...	...	1	587	15	6,618
65	26,414	...	...	...	...	...	...	...	...	...	...	6	900	71	27,314
24	5,590	...	...	...	...	...	...	...	...	...	...	1	150	25	5,740
30	9,200	...	...	...	...	...	...	...	...	...	...	1	150	31	9,350
36	10,907	...	...	...	...	...	...	...	...	...	...	3	450	39	11,357
27	8,524	...	...	...	...	...	...	...	...	...	...	4	530	31	9,054
17	5,055	...	...	...	...	...	...	...	...	1	295	5	1,500	23	6,850
for 1830-31 have not yet been received.						...	...	...	...	...	...	...	...	...	...

(continued)

(1)—Number of SHIPS and Amount of TONNAGE Entered Inwards

. continued)

27.

28.

... ..

FROM		CEYLON.										ARABIAN and							
FLAG.		British.		French.		Danish.		Indian.		TOTAL.		British.		American.		Danish.		Dutch.	
YEARS.		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793-4	}	...	...	...	...	...	...	...	...	...	...	There are not any Returns of the External							
1794-5		...	...	...	...	...	...	...	...	...	...
1795-6		...	...	...	...	...	...	...	...	...	3	1,000	...	...	...	...	...	...
1796-7	...	...	...	...	...	...	...	...	...	...	...	4	2,150	...	...	1	150	...	...
1797-8	...	...	...	...	...	...	...	...	...	...	...	1	350	...	...	...	...	...	...
1798-9	...	...	...	...	...	...	...	...	...	...	...	1	400	...	...	...	...	...	...
1799-1800	...	...	...	...	...	...	...	...	...	...	...	2	650	...	...	...	...	...	...
1800-1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1801-2	...	...	...	...	...	...	...	...	...	...	...	5	2,370	...	...	...	...	...	...
1802-3	...	...	...	...	...	...	...	...	...	...	...	21	8,308	...	...	...	...	...	...
1803-4	...	...	...	...	...	...	...	...	...	...	...	6	2,160	...	...	...	...	...	...
1804-5	...	14	6,691	...	...	...	...	11	1,800	25	8,491	...	...	1	210	...	...	...	...
1805-6	...	8	2,320	...	...	...	...	8	1,170	16	3,490	2	530	5	1,488	...	...	...	...
1806-7	...	6	2,074	...	...	1	380	6	1,000	13	3,154	1	280	...	...	...	...	...	...
1807-8	...	2	535	...	...	...	...	6	900	8	1,135	3	698	...	...	...	...	...	...
1808-9	...	1	300	...	...	...	...	7	1,050	8	1,350	3	917	...	...	...	...	...	...
1809-10	...	2	480	...	...	...	...	7	1,050	9	1,530	4	1,137	...	...	...	...	...	...
1810-11	...	...	...	...	...	...	...	6	900	6	900	4	1,034	...	...	...	...	...	...
1811-12	...	2	550	...	...	...	...	7	1,050	9	1,600	3	919	...	...	...	...	...	...
1812-13	...	8	3,343	...	...	...	...	2	300	10	3,643	3	710	...	...	...	...	...	...
1813-14	...	7	2,501	...	...	...	...	4	600	11	3,101	6	2,153	...	...	...	...	...	...
1814-15 (A)	...	4	465	...	...	...	...	2	300	6	765	5	1,622	...	...	...	...	...	...
1815-16	...	9	2,083	...	...	...	...	7	1,050	16	3,133	6	2,138	...	...	...	...	...	...
1816-17 (B)	...	5	1,682	...	...	...	...	1	150	6	1,832	8	3,122	...	...	...	...	...	...
1817-18 (C)	...	3	125	...	...	...	...	1	150	4	377	7	2,544	...	...	...	...	...	...
1818-19 (D)	...	15	8,237	...	...	...	...	4	600	19	8,837	15	6,166	...	...	...	...	...	...
1819-20 (E)	...	5	1,410	...	...	...	...	2	300	7	1,710	15	5,029	...	...	...	...	...	...
1820-21	...	3	456	...	...	...	...	1	150	4	606	13	5,113	...	...	...	...	...	...
1821-22 (F)	...	2	800	1	600	...	...	2	350	5	1,750	11	4,166	...	...	...	...	...	...
1822-23	...	4	773	...	...	...	...	3	450	7	1,223	10	4,071	...	...	...	...	...	...
1823-24	...	3	850	...	...	...	...	2	300	5	1,150	12	4,617	...	...	...	...	...	...
1824-25 (G)	...	4	1,274	...	...	...	...	...	...	4	1,274	3	956	...	...	...	...	...	...
1825-26 (H)	...	3	244	...	...	...	...	4	600	7	844	2	505	...	...	...	...	...	...
1826-27 (I)	...	2	553	...	...	...	...	2	300	4	853	3	902	...	...	...	...	...	...
1827-28	...	7	1,344	...	...	...	...	2	300	9	1,644	8	3,036	...	...	...	1	508	...
1828-29 (K)	...	...	...	...	...	...	...	2	300	4	1,538	...	...	...	...	...	...	...	...
1829-30	...	3	723	...	...	...	...	...	...	3	723	4	1,237	...	...	...	...	...	...
1830-31	...	...	...	...	...	...	...	...	...	...	...	The Returns of the External Commerce of Bengal							

II.—FINANCE.—COMMERCIAL.

1065

at the Port of Calcutta, between 1793 and 1831—continued.

28.						29.						30.	
PERSIAN GULFS.						MALDIVE ISLANDS						VARIOUS PLACES.	
Portuguese.		Indian.		TOTAL.		British.		Indian.		TOTAL.			
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years						...	...	...	...	...	...	...	...
...	...	9	3,050	12	4,050	...	...	19	1,343	19	1,343	...	...
...	...	9	4,100	14	6,400	...	...	21	1,490	21	1,490	...	...
...	...	8	2,743	9	3,093	...	...	8	480	8	480	...	...
...	...	11	6,125	15	6,525	...	...	11	1,540	11	1,540	...	...
...	...	9	4,350	11	5,000	...	...	18	2,750	18	2,750	...	...
...	...	6	2,050	6	2,050	...	...	33	4,950	33	4,950	...	...
...	...	13	5,450	18	8,120	...	...	23	3,450	23	3,450	...	...
...	...	11	5,150	32	13,458	...	...	25	3,750	25	3,750	...	...
...	...	8	4,600	14	6,760	1	500	25	3,750	26	4,250	...	...
...	...	12	6,200	13	6,410	...	...	20	3,450	20	3,450	...	...
...	...	23	10,330	30	12,318	1	250	12	1,800	13	2,050	...	...
...	...	21	8,230	21	8,510	...	...	23	3,700	23	3,700	...	...
...	...	22	9,950	25	10,648	...	...	26	3,900	26	3,900	...	...
...	...	3	1,450	6	2,397	1	300	25	3,750	26	4,050	...	...
...	...	25	10,640	29	11,777	...	...	21	4,050	21	4,050	...	...
...	...	16	6,975	20	8,009	...	...	25	3,750	25	3,750	...	...
...	...	10	4,150	13	5,069	2	410	24	3,600	26	4,010	...	...
...	...	16	6,600	19	7,340	1	460	21	3,600	25	4,060	...	...
...	...	11	5,300	17	7,453	1	250	29	4,350	30	4,600	...	...
...	...	9	3,625	14	5,247	1	250	32	4,800	33	5,050	...	...
...	...	14	5,350	20	7,488	...	...	28	4,200	28	4,200	...	...
...	...	11	3,725	19	6,847	1	500	23	3,450	24	3,950	...	...
...	...	12	4,613	19	7,187	1	500	31	4,650	32	5,150	...	...
...	...	18	6,344	33	12,510	...	...	17	2,550	17	2,550	...	...
...	...	16	6,995	31	12,624	...	...	16	2,400	16	2,400	...	...
...	...	17	7,574	30	12,887	...	...	21	3,150	21	3,150	...	...
...	...	16	7,770	27	12,236	1	150	26	4,000	27	4,150	...	...
...	...	11	4,800	21	8,871	...	...	33	4,950	33	4,950	...	...
...	...	10	4,581	22	9,198	...	...	27	4,050	27	4,050	...	...
...	...	11	4,978	14	5,934	1	200	20	3,000	21	3,200	...	...
...	...	11	4,954	13	5,459	1	203	9	1,350	10	1,553	...	...
...	...	11	4,547	14	5,449	...	...	14	2,100	14	2,100	...	...
...	...	15	6,256	24	9,860	...	...	16	2,400	16	2,400	...	...
...	...	9	3,088	13	5,526	...	...	11	1,650	11	1,650	...	...
...	...	9	4,225	13	5,462	...	...	11	1,650	11	1,650	...	...
for 1830-31 have not yet been received.						...	...	...	...	...	...	...	...

(continued)

1066 APPENDIX TO REPORT FROM SELECT COMMITTEE.

(1) - Number of SHIPS and Amount of TONNAGE Entered Inwards

(continued)

31

GRAND TOTALS AND OBSERVATIONS.

YEARS	GRAND TOTAL.	
	Ships.	Tons.
1793-4	There are not any Returns of the Imports and Exports of Bengal for these Years.	
1794-5	170	57,496
1795-6	172	64,924
1796-7	139	52,191
1797-8	121	43,319
1798-9	115	37,193
1799-1800	170	51,759
1800-1	153	52,911
1801-2	255	81,293
1802-3	177	65,027
1803-4	185	69,557
1804-5	210	82,311
1805-6	215	92,652
1806-7	191	72,341
1807-8	151	50,545
1808-9	168	63,151
1809-10	200	69,179
1810-11	225	87,121
1811-12	229	81,228
1812-13	222	77,192
1813-14 (A)	200	68,928
1815-16	291	91,966
1816-17 (B)	369	122,006
1817-18 (C)	428	161,316
1818-19 (D)	395	157,411
1819-20 (E)	273	103,553
1820-21	261	104,932
1821-22 (F)	261	102,804
1822-23	286	116,641
1823-24	228	87,524
1824-25 (G)	274	111,611
1825-26 (H)	244	97,281
1826-27 (I)	245	97,067
1827-28	304	111,233
1828-29 (K)	278	110,214
1829-30	236	89,655
1830-31	The Returns of the External Commerce of Bengal for 1830-31 have not yet been received.	

(A) 1814-15.
The Reporter of External and Internal Commerce, in his Report of this year, dated 12 September 1815, remarks as follows:—"It may be proper in this place to record the little advantage which the outputs of Great Britain have taken of the opening to them of the trade of India, one ship only, the Kingsmill, from Liverpool, 512 tons, having arrived at the Port of Calcutta since the renewal of the Honourable Company's modified Charter."

(B) 1816-17.
On the trade of this year, the Reporter remarks as follows:—"The imports from the mother country continue progressively to increase; the amount of merchandize in the year under consideration being nearly double that reported in the year 1814-15.
"By the immense influx of free traders, coming generally on the mere speculation of obtaining freights, and unprovided with funds for the purchase of a cargo, the rates of freight have progressively fallen until they have reached their present standard of about £7 per ton for dead weight and £8 for light goods."

"Another effect of the great influx of free traders has been to throw the country shipping entirely out of the competition, as far as concerns the direct traders between this country and Europe."

(C) 1817-18.
The Report of 1817-18 contains the following observations:—"The comparative statement of Imports from the mother country during the year 1817-18, exhibits an increase over the preceding year, which also greatly exceeded that of 1815-16, to an extent which has surpassed all calculation, and to give substantial reasons on principles of traffic for this great excess on importations of last year, would perhaps be a difficult task."

"The markets of India, during the period under report, have not warranted the least expectation that the usual articles of European Export would realize even prime cost, yet the supplies into India have continued to an extent never before known."

"The influx of European commodities since that period continuing constant and excessive, the articles have consequently been necessarily disposed of at public outcry, as well as by private contract, at prices which cannot have realized half their prime cost in England."

"Such a glut cannot be ascribed to a desire on the part of individuals here to obtain through this medium a return for goods sent from hence to England, as few who compose the mercantile community of this settlement, and who are the principal exporters of the produce of the East, have received consignments of goods on their own account to any extent worthy of remark."

"Nor does it appear that individuals resident in this country have been the greatest sufferers by the depression of prices of Europe articles in the market of India; it can therefore only be presumed that the chief cause which has given rise to the great importations during the last commercial year from the mother country, arises from erroneous notions entertained by those speculators who, without paying attention to the quantity of goods which had been shipped for this port subsequently to the trade with the East being opened on the present extended scale, wildly persevered in adventures, without a knowledge of the probable demand or consumption."

(D) 1818-19.
The Report of this year contains the following observations:—"Freights are still very low, and cannot be quoted at better rates than £7 per ton for dead weight, and £7 10s for light goods to the privileged ports in the United Kingdom. From the low rates at which freights has been procurable in the last two years we may reasonably calculate upon a reduction in the number of ships and quantity of tonnage importing from the United Kingdom, for, at the late and still existing rates, the shipowners must sail their ships at a loss of at least £2,000 upon every voyage which a ship of the burthen of 400 tons may make to India and back to London."

"Freights are lower by two-thirds and three-fourths than they have been known for the last twenty years."

"Nothing has contributed so much to reduce the shipping interest of this port to its present very depressed state as the Act of the 53d of His present Majesty, whereby the trade between the United Kingdom and her possessions in India was declared free, subject to certain conditions. The natural consequence of withdrawing the restrictions under which the intercourse between the parent state and her colonies in India had been previously conducted, has been so considerably to lower the rates of freight, as to preclude British India-built ships from engaging in this trade, otherwise than to a great and manifest disadvantage."

(E) 1819-20.
On the statements of this year the Reporter remarks as follows:—"In the Reports of the state of our External Trade which have annually been furnished since the opening of the trade in the year 1813, between the United Kingdom and the principal Settlements in British India, notice has been taken of the very great increase in the importations of British staples and manufactures of every description, and we took occasion, in the Report of the Commerce of the past year to observe, that 'the value of merchandize imported into Calcutta from the United Kingdom had increased from sicca rupees 53,76,775 in 1813-14, to sicca rupees 1,59,44,495 in 1818-19.' It has

at the Port of Calcutta between 1793 and 1831—continued.

OBSERVATIONS

has been shown that the value of merchandize consigned to Calcutta from the free ports in the United Kingdom fell in the present year to siaca rupees 80,33,573. We at the same time stated our conviction that the supply of merchandize had gone greatly beyond the demand, and discouraged the expectation of consignments from the United Kingdom keeping pace in future with that burst for enterprise and speculation which had so peculiarly characterized the trade during the five years which had elapsed since the restrictions under which it formerly laboured had been removed.

"The period has arrived when the effects of these ill-judged excessive speculations have manifested themselves in a very considerable decrease in the consignments to this, and we may venture to say to the other presidencies of India, of almost every description of British staple and manufactured goods, entirely because those goods had been previously imported in quantities at once sufficient for the consumption of years, and not in consequence of any diminution in the demand in this country for the staples and manufactures of the parent state; indeed from the very reduced prices at which British goods are at present procurable in the Indian markets, we should infer that the consumption of them has rather increased than otherwise during the year under consideration.

"The folly, not to say the ruinous consequences, of attempting to increase trade beyond consumption, is abundantly manifest in the present state of the markets in this country, which, in consequence of the redundancy of goods on hand, are languid and depressed beyond all former example, while there is not the smallest immediate prospect of any material revival of trade to improve the aspect of commercial affairs. The present state of things has been mainly brought about by the avidity with which the trade to India was sought after by many speculative individuals who possessed more enterprise than capital, and to whom the loan of money or offer of goods upon a long credit, was a temptation not to be resisted. Such generally proved themselves to be the deluded victims of some more desperate speculators, who having means and capital to lose, were the ultimate sufferers by this system of consigning goods to foreign markets, without regard to quantity or quality. They have learned that capital *can*, as it has, provide goods; and they have equally, and to their sad cost, now learned that it can neither ensure consumption nor increase the natural wants of man."

(F.)

1821-22.

On the Statements of this year the Reporter remarks as follows:—"It would be perhaps assuming too much to say that, from the average of the last five years, an estimate of the future extent of our trade may be formed; they were some of them years in which the spirit of speculation outstripped all reasonable bounds, and as such are disqualified from becoming examples of the ordinary progress of trade. That the trade of India has considerably increased since it was thrown open is evident, but that Great Britain has as yet very materially benefitted by this augmentation, is not so; inasmuch as the distress which is in the commercial world cannot be beneficial to a nation, and the commercial intercourse between the United Kingdom and the ports in British India can furnish many instances of individual distress arising from ill-considered speculations.

"When the trade was thrown open many a spirited adventurer engaged in it, thoughtlessly conceiving that a change in the system of our commercial intercourse with India would lead to as great and perhaps as sudden a change in the habits and prejudices of its inhabitants; they little thought how different are their ideas of comfort, convenience, and luxury, and how different their wants and habits from those of the inhabitants of Europe; these circumstances would appear to have been altogether lost sight of by those who formed such high expectations of an augmentation in the trade between India and England; and though still further facilities have been afforded to the merchants trading between the two countries, still they have been made rather from a desire to concede something to those who were suffering from a diminution in the demand upon the trade and commerce of England, than from any expectation that such a boon would lead to an increased consumption of European manufactures amongst the millions of our Indian population. Generally speaking, the consumption of the produce and manufactures of England must necessarily be regulated by the demand amongst the European residents in India, and with assuredly advance in proportion as the European population may increase.

"So long as the natives of India are in their present stage of social progress, so long as their habits and notions of the comforts and luxuries of life are so different from those entertained by the natives of Europe, the demand for its produce and manufacture must be confined to a few articles only. Our broad cloth, our metals, glass ware, and, above all, our piece goods, will always find a ready sale among them."

(G.)

1824-25.

On the Statements of this year the Reporter remarks as follows:—"It will be seen by the statements which have been submitted, that the ports of Greenock, Hull, and Bristol have discontinued their trade with India. Greenock maintained it until 1824-25, when only one vessel was sent out. The port of Hull sent out only one ship to this country in 1821-22, which returned thence. One ship came here from Bristol in 1820-21, which returned to London. The trade with Liverpool, although comparatively small in the number of vessels employed in it, is very valuable, and promises permanency at least, if not increase."

(H.)

1825-26.

On the Statements of this year he remarks as follows:—"The ports of London and Liverpool only have maintained the trade with us during the past year."

(I.)

1826-27.

On the Statement of this year as follows:—"The statement shows a renewal of intercourse with Greenock and Hull (suspended for some years), by the arrival of one vessel from each of those ports. The interchange of trade from these places cannot, however, we fear be steadily kept up."

(K.)

1828-29.

And on those of the year 1828-29, as follows, referring to accounts which illustrate the fact:—"Before closing our Report on the External Commerce of Bengal (generally), we submit a retrospect of the last ten years, drawing a comparison between the five years just past and the five years antecedent to that period, the aggregate result of which is a decrease in the trade both in Imports and Exports."

THOS. FISHER,
Searcher of the Records

APPENDIX.

(2).—A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Cleared Outwards, Three Presidencies; distinguishing the Countries for which

[illegible]

No. 30.

between the Years 1793 and 1831, from the Port of *Calcutta* to Countries beyond the Territories of the the Vessels cleared out, and stating the Flag under which they sailed.

3.								4.								5.			
AMERICA.								HAMBURGH.								HOLLAND			
American.		British.		Portuguese.		TOTAL.		Hamburgh.		British.		American.		Genoese.		TOTAL.		Dutch	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years								...	...	...	...	...	...	...	...	...	...	...	...
15	3,388	...	...	...	...	15	3,388	...	...	...	...	6	2,104	1	600	7	2,704	...	...
35	6,971	...	...	...	...	35	6,971	...	...	...	...	3	1,375	...	...	3	1,375	...	...
26	6,679	...	...	...	...	26	6,679	2	680	...	...	...	...	...	...	2	680	...	...
11	3,284	...	...	...	...	11	3,284	5	1,909	...	...	...	...	...	...	5	1,909	...	...
25	7,416	...	...	...	...	25	7,416	1	260	...	...	...	...	...	...	1	260	...	...
27	8,153	...	...	...	...	27	8,153	...	...	...	...	...	...	...	...	...	...	...	...
16	4,269	...	...	...	...	16	4,269	...	...	...	...	...	...	...	...	...	...	...	...
29	8,121	...	...	...	...	29	8,121	...	...	...	...	...	...	...	...	...	...	...	...
31	10,603	...	...	...	...	31	10,603	...	...	...	...	...	...	...	...	...	...	...	...
24	5,925	...	...	...	...	24	5,925	...	...	...	...	...	...	...	...	...	...	...	...
42	11,113	...	...	...	...	42	11,113	1	400	...	...	...	...	...	...	1	400	...	...
40	11,548	...	...	...	...	40	11,548	...	...	...	...	...	...	...	...	...	...	...	...
31	9,507	...	...	...	...	31	9,507	...	...	...	...	...	...	...	...	...	...	...	...
5	1,409	...	...	...	...	5	1,409	...	...	...	...	...	...	...	...	...	...	...	...
23	6,119	...	...	...	...	23	6,119	...	...	...	...	...	...	...	...	...	...	...	...
16	4,813	...	...	1	140	17	4,953	...	...	...	...	...	...	...	...	...	...	...	...
8	2,369	...	...	...	...	8	2,369	...	...	...	...	...	...	...	...	...	...	...	...
7	1,996	...	...	...	...	7	1,996	...	...	...	...	...	...	...	...	...	...	...	...
...
...
19	6,311	...	...	...	...	19	6,311	...	...	...	...	...	...	...	...	...	...	...	...
35	12,809	1	378	...	...	36	13,187	...	...	...	...	...	...	...	...	...	2	860	...
38	13,538	...	...	...	...	38	13,538	...	...	...	...	...	...	...	...	...	...	...	...
53	16,129	...	...	...	...	53	16,129	...	...	...	...	...	...	...	...	...	3	962	...
36	10,937	...	...	...	...	36	10,937	...	...	...	...	...	...	...	...	...	3	551	...
11	3,695	...	...	...	...	11	3,695	...	...	...	...	...	...	...	...	...	...	...	...
19	5,694	...	...	...	...	19	5,694	...	...	...	...	...	...	...	...	...	...	...	...
15	4,510	...	...	...	...	15	4,510	...	...	...	...	...	...	...	...	...	...	...	...
5	1,489	...	...	...	...	5	1,489	...	...	...	...	...	...	...	...	...	...	...	...
10	2,968	...	...	...	...	10	2,968	...	...	...	...	...	...	...	...	...	...	...	...
17	4,928	1	149	...	...	18	5,077	...	...	...	...	...	...	...	...	...	...	...	...
7	2,110	...	...	...	...	7	2,110	...	...	...	...	...	...	...	...	...	...	...	...
11	3,254	...	...	...	...	11	3,254	...	...	...	...	...	...	...	...	...	...	...	...
11	3,570	1	260	...	...	12	3,830	...	...	...	...	...	...	...	...	...	...	...	...
13	4,129	...	...	...	...	13	4,129	...	...	...	...	...	...	...	...	...	...	...	...
1830-31 have not yet been received								...	...	...	...	...	...	...	...	...	...	...	...

(2) —Number of SHIPS and Amount of TONNAGE Cleared Outwards

<i>continued)</i>		6.								7.		8.		9.					
TO ...		COPENHAGEN.								SWEDEN.		CADIZ		GIBRALTAR and MALTA.					
FLAGS		Danish.		American.		Indian		TOTAL		Swedish.		Spanish.		British.		French		TOTAL.	
YEARS.		Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.
1793-4	1	...	...	...	...	...	...	...	...	...	...	...	...	There are not any Returns of the External					
1794-5	1	...	...	...	...	...	...	...	...	...	...	...	...
1795-6	...	5	2,770	...	...	...	...	5	2,770	...	...	...	...	...	...	...	...	...	...
1796-7	...	7	3,587	...	...	...	...	7	3,587	...	...	...	...	...	...	...	...	...	...
1797-8	...	8	4,230	2	545	...	...	10	4,775	...	...	...	...	...	...	...	...	...	...
1798-9	...	5	2,970	1	275	...	...	6	3,245	...	...	...	...	...	...	...	...	...	...
1799-1800	...	...	...	...	...	5	2,500	5	2,500	...	...	...	...	...	...	...	...	...	...
1800-1	...	3	2,200	...	...	...	...	3	2,200	...	...	...	...	...	...	...	...	...	...
1801-2	...	2	1,150	...	...	...	...	2	1,150	...	...	...	...	...	...	...	...	...	...
1802-3	...	4	2,300	...	...	...	...	4	2,300	...	...	1	560	...	...	...	...	...	...
1803-4	...	4	2,600	...	...	...	...	4	2,600	...	...	1	700	...	...	...	...	...	...
1804-5	...	7	3,075	...	...	...	...	7	3,075	...	...	1	430	...	...	...	...	...	...
1805-6	...	4	1,120	...	...	...	...	4	1,120	...	...	...	...	...	...	...	...	...	...
1806-7	...	3	1,341	...	...	...	...	3	1,341	...	...	...	...	...	...	...	...	...	...
1807-8	...	2	880	...	...	...	...	2	880	...	...	...	...	...	...	...	...	...	...
1808-9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1809-10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1810-11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1811-12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1812-13	...	...	...	...	...	...	...	...	...	...	...	1	450	...	...	...	...	...	...
1813-14	...	...	...	...	...	...	...	...	...	...	...	2	781	...	...	...	...	...	...
1814-15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1815-16	...	1	300	...	...	...	...	1	300	...	...	1	604	...	...	...	...	...	...
1816-17	...	...	...	...	...	...	...	...	...	...	...	2	1,037	...	...	...	...	...	...
1817-18	...	5	2,026	...	...	...	...	5	2,026	...	...	...	...	7	3,044	...	...	7	3,044
1818-19	...	3	1,143	...	...	...	...	3	1,143	...	...	...	...	8	4,339	...	...	8	4,339
1819-20	...	5	2,466	...	...	...	...	5	2,466	...	...	...	...	2	582	...	...	2	582
1820-21	...	1	400	...	...	...	...	1	400	...	...	...	...	1	439	...	...	1	439
1821-22	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1,400	...	...	3	1,400
1822-23	...	1	468	...	...	...	...	1	468	...	...	...	...	2	1,052	...	...	2	1,052
1823-24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1824-25	...	1	468	...	...	...	...	1	468	...	...	...	...	...	...	...	...	...	...
1825-26	...	1	500	...	...	...	...	1	500	1	360	...	...	1	202	1	160	2	362
1826-27	...	...	...	...	...	...	...	...	...	1	300	...	...	1	155	...	...	1	155
1827-28	...	...	...	...	...	...	...	...	...	1	335	...	...	...	...	...	...	...	...
1828-29	...	...	...	...	...	...	...	...	...	3	745	...	...	...	...	...	...	...	...
1829-30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1830-31	...	...	...	...	...	...	...	...	...	...	...	...	...	The Returns of the External Commerce of Bengal					

* In the registers from which this statement has been compiled, the

II.—FINANCE.—COMMERCIAL.

1071

from the Port of Calcutta between 1793 and 1831—continued.

10.

11

PORTUGAL.								BRAZILS.									
Portuguese.		British.		American.		TOTAL.		Portuguese.		British.		American.		Spanish.		TOTAL.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years								...	...	...	...	...	...	...	...	...	...
2	1,144	...	...	1	400	3	1,544	...	...	...	...	...	...	...	...	...	...
1	400	...	...	...	...	1	400	...	...	...	...	...	...	...	...	...	...
4	2,160	...	...	...	...	4	2,160	...	...	...	...	...	...	...	...	...	...
1	300	...	...	...	...	1	300	...	...	...	...	...	...	...	...	...	...
6	3,050	...	...	...	...	6	3,050	...	...	...	...	...	...	...	...	...	...
4	2,870	...	...	...	...	4	2,870	...	...	...	...	...	...	...	...	...	...
2	1,900	...	...	...	...	2	1,900	...	...	...	...	...	...	...	...	...	...
5	2,550	...	...	...	...	5	2,550	...	...	...	...	...	...	...	...	...	...
7	3,350	...	...	...	...	7	3,350	...	...	...	...	...	...	...	...	...	...
5	2,550	...	...	...	...	5	2,550	...	...	...	...	...	...	...	...	...	...
1	1,370	...	...	...	...	4	1,370	...	...	...	...	...	...	...	...	...	...
3	1,700	...	...	...	...	3	1,700	...	...	...	...	...	...	...	...	...	...
4	2,030	...	...	...	...	4	2,030	...	...	...	...	...	...	...	...	...	...
1	180	...	...	...	...	1	180	...	...	...	...	...	...	...	...	...	...
2	710	...	...	...	...	2	710	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	6	2,213	...	...	...	...	...	...	6	2,213
...	...	...	...	...	...	...	...	6	2,905	...	...	...	...	...	...	6	2,905
11	*5,560	...	...	...	...	11	5,560	...	...	...	...	...	...	...	...	...	...
2	1,087	...	...	...	...	2	1,087	2	625	...	...	...	...	...	...	2	625
6	2,700	...	...	...	...	6	2,700	5	1,600	...	...	...	...	1	196	6	1,796
5	3,000	...	...	...	...	5	3,000	5	1,845	...	...	...	...	...	...	5	1,845
11	5,133	...	...	...	...	11	5,133	6	1,546	...	...	...	...	...	...	6	1,546
4	1,710	...	...	...	...	4	1,710	4	1,300	2	900	...	...	...	...	6	2,200
4	2,650	...	...	...	...	4	2,650	4	940	...	...	...	...	...	...	4	940
4	2,300	...	...	...	...	4	2,300	3	1,030	...	...	...	...	...	...	3	1,030
6	4,306	...	...	...	...	6	4,306	2	890	...	...	...	...	...	...	2	890
1	600	...	...	...	...	1	600	1	180	...	...	...	...	...	...	1	180
7	3,510	...	...	...	...	7	3,510	1	180	...	...	...	...	...	...	1	180
...	...	...	...	...	...	...	...	2	460	...	...	...	...	...	...	2	460
2	660	...	...	...	...	2	660	1	400	1	180	...	...	...	...	2	580
2	710	...	...	...	...	2	710	1	382	...	...	...	...	...	...	1	382
1	450	...	...	...	...	1	450	1	400	...	...	...	...	...	...	1	400
1	515	...	...	...	...	1	515	1	400	...	...	...	...	...	...	1	400
...	...	1	327	...	...	1	327	1	400	...	...	...	...	...	...	1	400
...
for 1830-31 have not yet been received.								...	...	...	...	...	...	...	...	...	...

Portuguese and Brazilian Tonnage are this year combined.

(Continued

(2)—Number of SHIPS and Amount of TONNAGE Cleared Outwards

(continued)

12

TO ...		SOUTH AMERICA.											
FLAGS.		British.		French.		American.		Spanish.		Chili.		TOTAL.	
YEARS.		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793-4	}	...	...	...	...	...	...	...	...	...	...	...	...
1794-5		...	...	...	...	...	...	...	...	...	...	...	...
1795-6	...	...	...	...	...	...	...	...	...	...	...	...	...
1796-7	...	...	...	...	...	...	...	...	...	...	...	...	...
1797-8	...	...	...	...	...	...	...	...	...	...	...	...	...
1798-9	...	...	...	...	...	...	...	...	...	...	...	...	...
1799-1800	...	...	...	...	...	...	...	...	...	...	...	...	...
1800-1	...	...	...	...	...	...	...	...	...	...	...	...	...
1801-2	...	...	...	...	...	...	...	...	...	...	...	...	...
1802-3	...	...	...	...	...	...	...	...	...	...	...	...	...
1803-4	...	...	...	...	...	...	...	...	...	...	...	...	...
1804-5	...	...	...	...	...	...	...	...	...	...	...	...	...
1805-6	...	...	...	...	...	...	...	...	...	...	...	...	...
1806-7	...	...	...	...	...	...	...	...	...	...	...	...	...
1807-8	...	...	...	...	...	...	...	...	...	...	...	...	...
1808-9	...	...	...	...	...	...	...	...	...	...	...	...	...
1809-10	...	...	...	...	...	...	...	...	...	...	...	...	...
1810-11	...	...	...	...	...	...	...	...	...	...	...	...	...
1811-12	...	...	...	...	...	...	...	...	...	...	...	...	...
1812-13	...	...	...	...	...	...	...	...	...	...	...	...	...
1813-14	...	...	...	...	...	...	...	...	...	...	...	...	...
1814-15	...	...	...	...	...	...	...	...	...	...	...	...	...
1815-16	...	...	...	...	...	...	...	...	...	...	...	...	...
1816-17	...	...	...	...	...	...	...	...	...	...	...	...	...
1817-18	...	2	866	...	...	...	...	...	...	...	...	2	866
1818-19	...	1	298	...	...	...	...	1	1,053	...	...	2	1,351
1819-20	...	5	1,869	...	...	...	...	...	...	...	...	5	1,869
1820-21	...	8	3,100	...	...	...	...	...	...	...	...	8	3,100
1821-22	...	8	2,677	...	...	...	...	...	...	...	...	8	2,677
1822-23	...	3	982	...	...	...	...	...	...	...	...	3	982
1823-24	...	9	3,012	...	...	...	...	...	...	...	...	9	3,012
1824-25	...	3	850	...	...	...	...	...	...	...	...	3	850
1825-26	...	1	248	...	...	...	...	...	...	...	...	1	243
1826-27	...	1	282	...	...	...	...	...	...	...	...	1	282
1827-28	...	...	...	...	...	...	...	...	...	...	...	...	...
1828-29	...	1	472	...	...	...	...	...	...	...	...	1	472
1829-30	...	2	820	...	...	...	...	...	...	...	...	2	820
1830-31	...	...	...	...	...	...	...	...	...	...	...	...	...
The Returns of the External Commerce of Bengal													

There are not any Returns of the External

II.—FINANCE.—COMMERCIAL.

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from the Port of *Calcutta*, between 1793 and 1831—*continued*.

13.														14.	
CHINA.														ST. HELENA.	
British.		French.		American.		Danish.		Portuguese.		Indian.		TOTAL.		British	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years															
3	1,450	...	...	...	...	...	...	3	660	...	...	6	2,110	...	...
1	470	...	...	...	...	...	...	3	650	...	...	4	1,120	...	...
2	825	...	...	...	...	1	700	5	1,250	...	...	8	2,775	...	...
...	...	...	...	...	...	...	...	3	1,000	...	...	3	1,000	...	...
2	650	...	...	...	...	...	...	...	...	...	...	2	650	...	...
...	...	...	...	...	...	...	...	5	1,050	...	...	5	1,050	...	...
...	...	...	...	...	...	...	...	4	950	...	...	4	950	1	200
5	3,000	...	...	...	...	...	...	7	1,950	...	...	12	4,950	...	...
13	8,606	...	...	...	...	...	...	14	3,990	...	...	27	12,596	1	400
8	4,907	...	...	...	...	...	...	10	3,450	...	...	18	8,357	...	...
19	10,743	...	...	...	...	...	...	12	4,487	...	...	31	15,230	...	...
35	16,291	...	...	...	...	1	600	7	2,500	1	450	44	19,841	...	...
15	8,008	...	...	...	...	...	...	...	...	...	...	15	8,008	...	...
10	6,873	...	...	...	...	...	...	5	1,725	...	...	15	8,598	...	...
10	5,458	...	...	...	...	...	...	3	1,225	...	...	13	6,683	...	...
6	3,380	...	...	...	...	...	...	4	1,425	1	800	11	5,605	...	...
8	5,101	...	...	...	...	...	...	4	1,115	2	1,250	14	7,466	...	...
3	1,971	...	...	...	...	...	...	4	1,175	...	...	7	3,146	...	...
17	11,278	...	...	...	...	...	...	7	1,920	...	...	24	13,198	...	...
20	11,508	...	...	...	...	...	...	5	1,790	A.	...	25	13,298	...	...
18	10,593	...	...	...	...	...	...	7	2,475	...	...	25	13,068	...	...
27	14,209	...	...	...	...	...	...	7	2,310	...	...	34	16,519	...	...
29	15,222	...	...	...	...	...	...	7	2,540	...	...	36	17,762	...	...
22	12,523	1	677	...	...	...	...	7	2,928	...	...	30	16,128	...	...
12	7,849	1	332	...	...	...	...	5	1,960	...	...	18	10,141	...	...
21	14,757	...	...	...	...	...	...	8	3,603	...	...	29	18,360	...	...
16	11,740	...	...	...	...	...	...	8	2,583	...	...	24	14,323	...	...
11	8,584	...	...	...	...	...	...	9	3,730	...	...	20	12,314	...	...
13	9,993	...	...	...	...	...	...	2	770	...	...	15	10,763	...	...
20	14,962	...	...	...	...	...	...	...	...	...	...	20	14,962	...	...
18	7,095	...	...	...	...	...	...	4	1,620	...	...	22	8,715	...	...
29	19,066	1	810	...	...	...	...	5	1,848	...	...	35	21,724	...	...
26	16,719	...	...	...	...	...	...	1	360	...	...	27	17,079	...	...
16	11,514	...	...	...	...	...	...	...	...	...	...	16	11,514	...	...
15	4,761	...	...	...	...	1	201	2	411	...	...	18	5,373	...	...
for 1830-31 have not yet been received.														...	...

(continued)

(continued)		15												16		17. ...							
10 ...		MAURITIUS.												MADEIRA.		MANILLA.							
YEARS.		British.		French.		American.		Danish.		Portuguese.		Indian.		TOTAL.		American.		Spanish.		British.		American.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	
1793-4	}	...	...	...	...	...	...	...	...	...	...	...	...	...	There are not any Returns of the External							
1794-5		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1795-6		1	350	1	300	2	650	1	180
1796-7		2	290	2	290
1797-8		1	110	1	110
1798-9	...	...	...	...	...	...	1	107	...	...	...	...	1	107	...	...	...	...	...	...	...	...
1799-1800	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1800-1	1	125
1801-2	1	781	...	...	...	...	...	...	...	...	...	...	1	784	...	...	...	...	...	...	...	...
1802-3	3	352	6	1,363	1	230	...	...	...	...	...	...	10	1,945	...	...	...	...	1	300	...	...
1803-4	1	190	...	...	...	...	1	338	...	...	...	...	2	528	...	...	...	...	...	...	...	...
1804-5	...	...	...	...	...	...	5	752	...	...	...	...	5	752	...	...	...	...	...	...	...	...
1805-6	1	357	...	...	...	...	3	408	...	...	...	...	4	765	...	...	...	...	...	...	...	...
1806-7	...	...	...	...	...	...	3	460	...	...	...	...	3	460	...	...	...	...	...	...	...	...
1807-8	...	...	...	...	...	...	2	420	...	...	...	...	2	420	...	...	...	...	...	...	...	...
1808-9	...	...	1	400	...	...	...	...	...	...	...	...	1	400	...	...	...	...	...	...	...	...
1809-10	1	500	...	...	...	...	...	...	...	...	...	...	1	500	...	...	1	470	4	730	...	...
1810-11	15	3,048	4	770	...	...	...	...	...	...	3	1,275	22	5,093	...	...	2	950	1	990	...	...
1811-12	22	4,731	...	...	...	...	...	...	...	...	...	...	22	4,731	...	...	1	650	...	...	...	...
1812-13	39	10,073	...	...	...	...	...	...	...	...	...	...	39	10,073	...	...	1	80	1	387	...	...
1813-14	23	7,120	...	...	...	...	...	1	95	...	...	...	24	7,215	...	...	...	...	...	...	...	...
1814-15	14	3,218	...	...	...	...	...	...	...	...	...	...	14	3,218	...	...	1	125	2	600	...	...
1815-16	43	10,391	...	...	...	...	...	...	...	...	...	...	43	10,391	...	...	...	1	120	...	...	...
1816-17	50	14,027	...	...	...	...	...	...	...	1	400	...	51	14,427	...	...	1	486	3	855	...	...
1817-18	16	4,031	2	456	...	...	...	...	...	...	...	...	18	4,487	...	...	...	6	1,514	...	...	...
1818-19	30	6,353	3	1,180	...	...	...	...	...	...	...	...	23	7,533	...	...	1	280	3	786	...	...
1819-20	14	4,000	4	1,419	...	...	...	...	...	...	...	...	18	5,419	...	...	...	1	350	...	...	...
1820-21	17	5,099	3	987	...	...	...	...	...	...	...	...	20	6,686	...	...	...	2	481	...	...	...
1821-22	21	8,748	10	2,979	...	...	1	353	...	...	...	...	32	12,080	...	...	1	610	2	852	...	...
1822-23	20	8,795	12	3,626	...	...	...	...	...	...	...	...	32	12,421	...	...	2	542	...	...	...	...
1823-24	14	4,902	6	1,631	...	...	...	...	...	...	...	...	20	6,533	...	...	1	184	...	...	...	...
1824-25	7	3,069	6	2,039	...	...	...	...	...	...	...	...	13	5,108	...	...	...	2	595	...	...	...
1825-26	5	1,941	5	1,322	...	...	...	...	...	...	...	...	10	3,263	...	...	1	180	1	280	...	...
1826-27	9	3,706	6	1,173	...	...	...	...	...	...	...	...	15	4,879	...	...	...	...	...	...	...	...
1827-28	37	13,482	10	2,924	...	...	...	...	...	...	...	...	47	16,416	...	...	1	320	...	...	...	...
1828-29	51	18,314	7	2,052	...	...	...	...	...	1	600	...	59	20,966	...	...	...	...	...	...	...	...
1829-30	40	14,151	8	2,449	...	...	...	...	...	...	...	...	48	16,600	...	...	...	1	172	...	...	...
1830-31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	The Returns of the External Commerce of Bengal							

II.—FINANCE.—COMMERCIAL.

1075

from the Port of Calcutta, between 1798 and 1831—continued.

17.								18.								19.							
MANILLA.								NEW SOUTH WALES.								CAPE OF GOOD HOPE.							
Danish.		Hamburgh.		Portuguese.		TOTAL.		British.		Danish.		TOTAL.		British.		American.		Danish.		Hamburgh.		TOTAL.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years.																							
1	150	...	...	...	...	2	330	2	390	...	...	2	390	1	311	...	...	...	...	...	...	1	311
1	150	...	...	...	...	1	150	1	300	...	...	1	300	...	...	...	...	...	...	...	...	...	...
3	650	...	...	...	...	3	650	1	270	...	...	1	270	...	...	...	...	...	...	...	...	...	...
4	1,150	...	...	...	...	4	1,150	1	300	...	...	1	300	...	...	...	...	...	...	...	...	...	...
3	940	...	...	...	...	3	940	1	350	1	150	2	500	2	580	...	...	...	...	...	...	2	580
1	250	...	...	...	...	2	375	1	100	...	...	1	100	...	...	...	...	...	...	...	...	...	...
...	...	1	320	2	440	3	760	1	200	...	...	1	200	3	1,464	3	750	...	...	...	...	6	2,214
1	260	...	...	...	...	2	560	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	2	850	...	...	2	850	...	...	...	...	...	...	...	...	...	...
1	750	...	...	...	...	1	750	2	1,000	...	...	2	1,000	...	...	...	...	...	...	...	...	...	...
2	1,050	...	...	1	300	3	1,350	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	350	1	350	1	200	...	...	1	200	4	1,295	...	...	...	...	...	...	4	1,295
...	...	...	...	...	...	...	...	2	380	...	...	2	380	1	230	...	...	...	...	...	...	1	230
...	...	...	...	1	300	6	1,500	2	607	...	...	2	607	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	2	1,440	7	1,751	...	...	7	1,751	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	3	1,110	10	1,680	...	...	10	1,680	1	125	...	...	...	...	...	...	1	125
...	...	...	...	...	...	1	650	9	1,841	...	...	9	1,841	3	702	...	...	...	...	...	...	3	702
...	...	...	...	2	450	4	917	2	280	...	...	2	280	2	730	...	...	...	...	...	...	2	730
...	...	...	...	1	70	1	70	8	1,271	...	...	8	1,271	2	684	...	...	...	...	...	...	2	684
...	...	...	...	1	70	4	795	6	1,360	...	...	6	1,360	3	943	...	...	...	...	...	...	3	943
...	...	...	...	...	...	1	120	8	1,117	...	...	8	1,117	9	3,380	...	...	...	...	...	...	9	3,380
...	...	...	...	...	...	4	1,341	6	1,282	...	...	6	1,282	8	1,691	...	...	...	...	...	...	8	1,691
...	...	...	...	...	...	6	1,514	5	907	...	...	5	907	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	4	1,066	5	923	...	...	5	923	5	1,549	...	...	...	...	...	...	5	1,549
1	240	...	...	...	...	2	590	10	2,132	...	...	10	2,132	8	2,822	...	...	...	...	...	...	8	2,822
...	...	...	...	...	...	2	481	6	1,008	...	...	6	1,008	2	888	...	...	...	...	...	...	2	888
...	...	...	...	...	...	3	1,462	3	633	...	...	3	633	3	887	...	...	...	...	...	...	3	887
...	...	...	...	...	...	2	512	6	996	...	...	6	996	7	2,434	...	...	...	...	...	...	7	2,434
...	...	...	...	...	...	1	184	...	...	...	...	...	...	7	1,461	...	...	...	...	...	...	7	1,461
...	...	...	...	...	...	2	595	...	...	...	...	...	...	2	450	...	...	...	...	...	...	2	450
...	...	...	...	...	...	3	560	3	529	...	...	3	529	5	1,034	...	...	...	...	...	...	5	1,034
...	...	...	...	...	...	...	...	4	552	...	...	4	552	2	398	...	...	...	...	...	...	2	398
...	...	...	...	...	...	1	320	4	627	...	...	4	627	4	833	...	...	...	...	...	...	4	833
...	...	...	...	...	...	...	...	3	723	...	...	3	723	1	535	...	...	...	...	...	...	1	535
...	...	...	...	...	...	1	172	5	1,149	...	...	5	1,149	...	...	...	...	...	...	...	...	...	...
for 1830-31 have not yet been received.																							

1076 APPENDIX TO REPORT FROM SELECT COMMITTEE.

(2.)—Number of SHIPS and Amount of TONNAGE Cleared Outwards

continued)

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21.

22.

TO		NEW GUINEA		MOSAMBIQUE.						JAVA.											
YEARS		British.		Portuguese		British		TOTAL		Dutch		British		French.		American.		Danish		TOTAL	
		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793-4	}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1794-5		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1795-6		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1796-7		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1797-8		1	150	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1798-9		2	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1799-1800		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1800-1		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1801-2		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1802-3		...	...	...	...	...	...	...	...	...	2	450	...	...	...	...	...	...	2	450	...
1803-4		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1804-5		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1805-6		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1806-7		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	866	3	866
1807-8		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1808-9		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1809-10		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1810-11		...	...	...	...	...	...	...	...	...	2	580	...	...	...	...	...	...	2	580	...
1811-12		...	...	...	...	...	...	...	...	...	13	4,549	...	...	...	...	...	...	13	4,549	...
1812-13		...	...	...	...	...	...	...	...	...	25	8,332	...	...	...	...	...	...	25	8,332	...
1813-14		...	1	220	...	...	1	220	...	...	10	3,115	...	...	...	...	...	...	10	3,115	...
1814-15		...	...	1	220	...	...	1	220	...	...	13	4,190	...	...	...	...	...	13	4,190	...
1815-16		...	...	...	...	...	...	...	...	...	15	4,258	...	...	...	...	...	...	15	4,258	...
1816-17		...	...	...	...	...	...	...	...	...	6	1,802	...	...	...	...	...	...	6	1,802	...
1817-18		...	...	1	220	...	...	1	220	1	190	9	2,279	...	...	...	...	...	10	2,469	...
1818-19		...	...	...	...	...	...	...	...	...	3	814	...	...	...	...	...	1	250	4	1,064
1819-20		...	...	...	...	...	...	...	...	1	250	17	4,644	...	...	...	...	1	200	19	5,094
1820-21		...	...	...	...	...	...	...	...	1	683	17	4,720	...	...	...	...	...	...	18	5,403
1821-22		...	...	...	...	...	...	...	...	2	473	11	3,932	...	...	...	...	...	...	13	4,405
1822-23		...	...	...	1	87	1	87	...	...	502	10	3,761	...	...	...	...	...	...	13	4,263
1823-24		...	...	...	...	...	...	...	...	...	320	8	3,053	...	...	...	...	...	...	9	3,373
1824-25		...	...	...	...	...	...	...	...	...	4	1,525	...	...	...	...	...	...	...	4	1,525
1825-26		...	...	...	...	...	...	...	...	4	1,027	9	2,147	...	...	...	...	...	...	13	3,174
1826-27		...	...	...	...	...	...	...	...	3	970	6	1,367	...	...	...	...	...	...	9	2,337
1827-28		...	...	...	...	...	...	...	...	3	1,040	3	973	...	...	...	...	...	...	6	1,993
1828-29		...	...	...	...	...	...	...	...	2	460	1	255	...	...	...	...	...	...	3	715
1829-30		...	...	...	...	...	...	...	...	2	441	3	578	1	340	...	...	...	...	6	1,362
1830-31		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

The Returns of the External Commerce of Bengal

II.—FINANCE.—COMMERCIAL.

1077

from the Port of *Calcutta* between 1793 and 1831—*continued*.



23.

24

AMBOYNA.		SUMATRA.														TOTAL	
British.		British.		French.		American.		Danish.		Dutch.		Portuguese.		Ind. an.		TOTAL	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	✓	Tons.
Commerce of Bengal for those Years.																	
...
...	...	4	2,050	...	...	...	...	1	200	...	...	...	...	...	...	5	2,250
...	...	2	1,010	...	...	...	...	...	...	...	...	...	...	...	...	2	1,010
...	...	3	1,233	...	...	...	...	...	...	...	...	...	...	...	...	3	1,233
...	...	6	1,825	...	...	...	...	...	...	...	...	...	...	...	...	6	1,825
...	...	8	2,990	...	...	1	95	1	300	...	...	...	...	...	...	10	3,385
...	...	13	5,190	...	...	...	...	...	...	...	...	...	...	...	...	13	5,190
...	...	9	2,970	...	...	...	...	...	...	...	...	...	...	...	...	9	2,970
...	...	10	2,710	...	...	...	...	...	...	...	...	...	...	...	...	10	2,710
...	...	3	900	...	...	...	...	...	...	...	...	...	...	...	...	3	900
...	...	10	2,935	...	...	...	...	...	...	...	...	...	...	...	...	10	2,935
...	...	5	1,982	...	...	...	...	...	...	...	...	...	...	...	...	5	1,982
...	...	8	2,215	...	...	...	...	...	...	...	...	...	...	...	...	8	2,215
...	...	5	2,096	...	...	...	...	...	...	...	...	...	...	...	...	5	2,096
...	...	6	1,863	...	...	...	...	...	...	...	...	...	...	...	...	6	1,863
5	2,080	6	1,055	...	...	...	...	...	...	...	...	...	...	...	...	6	1,055
5	954	12	2,856	...	...	...	...	...	...	...	...	...	...	...	...	12	2,856
...	...	7	2,366	...	...	...	...	...	...	...	...	...	...	...	...	7	2,366
1	90	13	3,324	...	...	...	...	...	...	...	...	...	...	...	...	13	3,324
2	256	11	2,937	...	...	...	...	...	...	...	...	...	...	...	...	11	2,937
...	...	9	2,976	...	...	...	...	...	...	...	...	...	...	...	...	9	2,976
2	921	7	1,959	...	...	...	...	...	...	...	...	...	...	...	...	7	1,959
...	...	14	3,760	...	...	...	...	...	...	...	...	...	...	...	...	14	3,760
...	...	11	2,369	...	...	...	...	...	...	...	...	...	...	...	...	11	2,369
...	...	13	3,483	...	...	...	...	...	...	1	45	...	...	...	...	14	3,528
...	...	6	1,860	...	...	...	...	...	...	...	...	...	...	...	...	6	1,860
...	...	8	2,444	...	...	...	...	...	...	...	...	...	...	...	...	8	2,444
...	...	5	1,785	...	...	...	...	...	...	2	298	...	...	...	...	7	2,083
...	...	2	541	...	...	...	...	...	...	3	728	...	...	...	...	5	1,269
...	...	3	1,264	1	170	...	...	...	...	...	...	...	...	...	...	4	1,434
...	...	2	369	...	...	...	...	...	...	...	...	...	...	...	...	2	369
...	...	6	1,389	...	...	...	...	...	...	...	...	...	...	...	...	6	1,389
...	...	1	198	...	...	...	...	...	...	...	...	...	...	...	...	1	198
...
...	1	119	...	...	...	...	1	119
for 1830-31 have not yet been received.																	

1078 APPENDIX TO REPORT FROM SELECT COMMITTEE.

(2).—Number of SHIPS and Amount of TONNAGE Cleared Outwards

(continued)

25.

TO ...		PENANG and EASTWARDS.																	
FLAGS		British.		French.		American.		Danish.		Dutch.		Portuguese.		Indian.		TOTAL.			
YEARS		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.		
1793-4	}	There are not any Returns of the External									
1791-5		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1795-6	...	31	7,000	...	...	...	...	3	1,146	...	...	...	...	...	...	34	8,146
1796-7	...	22	6,120	...	...	1	487	5	1,670	...	...	...	...	...	...	28	8,277
1797-8	...	9	1,820	...	...	...	...	10	4,010	...	...	...	...	...	...	19	5,830
1798-9	...	18	4,215	...	...	...	...	2	450	...	...	...	...	...	...	20	4,665
1799-1800	...	28	7,797	...	...	...	...	1	150	...	...	...	...	...	...	29	7,947
1800-1	...	29	7,274	...	...	...	...	...	...	...	...	1	300	...	...	30	7,574
1801-2	...	34	8,469	...	...	...	...	1	350	...	...	1	450	1	400	37	9,669
1802-3	...	42	13,879	...	...	...	...	...	...	...	...	...	...	1	150	43	14,029
1803-4	...	34	7,745	...	...	...	...	1	250	...	...	...	...	...	...	35	7,975
1804-5	...	28	8,195	...	...	...	...	...	...	...	...	...	...	...	...	28	8,195
1805-6	...	28	10,386	...	...	...	...	...	...	...	...	1	350	...	...	29	10,736
1806-7	...	21	7,312	...	...	...	...	3	392	...	...	...	...	...	...	24	7,704
1807-8	...	26	7,510	...	...	...	...	1	272	...	...	...	...	1	500	28	8,312
1808-9	...	25	4,232	...	...	...	...	...	...	...	...	...	...	3	900	28	5,132
1809-10	...	25	5,819	...	...	...	...	...	...	...	...	...	...	...	...	25	5,819
1810-11	...	42	4,867	...	...	...	...	...	...	...	...	...	...	...	...	22	4,867
1811-12	...	19	4,611	...	...	...	...	...	...	...	...	...	...	3	1,200	22	5,814
1812-13	...	17	4,223	...	...	...	...	...	...	...	...	...	...	...	...	17	4,223
1813-14	...	31	8,620	...	...	...	...	...	...	...	...	...	...	1	80	32	8,700
1814-15	...	18	4,233	...	...	...	...	...	...	...	...	...	...	...	...	18	4,233
1815-16	...	19	3,985	...	...	...	...	...	...	...	...	...	...	...	...	19	3,985
1816-17	...	19	6,573	...	...	...	...	...	...	...	...	...	...	...	...	19	6,573
1817-18	...	22	4,493	...	...	...	...	...	...	...	...	...	...	...	...	22	4,493
1818-19	...	23	5,939	...	...	...	...	...	...	...	...	...	...	1	150	24	5,189
1819-20	...	11	2,331	...	...	...	...	...	...	...	...	...	...	1	350	12	2,681
1820-21	...	20	5,367	...	...	...	...	...	...	...	...	...	...	1	210	21	5,577
1821-22	...	32	11,291	...	...	...	...	...	...	...	...	...	...	...	...	32	11,291
1822-23	...	26	9,158	...	...	...	...	...	...	...	...	...	...	1	438	27	9,596
1823-24	...	18	6,151	...	...	...	...	...	...	...	...	...	...	1	500	19	6,651
1824-25	...	14	3,559	...	...	...	...	...	...	...	...	...	...	...	...	14	3,559
1825-26	...	15	4,709	...	...	...	...	...	...	...	...	...	...	...	...	15	4,709
1826-27	...	17	4,615	...	...	...	...	1	250	...	...	...	...	1	150	19	5,015
1827-28	...	19	4,162	...	...	...	...	...	...	...	...	...	...	1	580	20	4,742
1828-29	...	14	3,111	1	800	...	...	...	...	...	...	...	...	...	...	15	3,911
1829-30	...	17	4,102	...	...	...	...	...	...	...	...	...	...	...	...	17	4,102
1830-31	The Returns of the External Commerce of Bengal									

The Returns of the External Commerce of Bengal

from the Port of Calcutta, between 1793 and 1831—continued.

26.

FIGURE.

British.		French.		American.		Danish.		Dutch.		Portuguese.		Indian.		TOTAL.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commeroe of Bengal for these Years.						...	...	...	...	...	...	...	...	...	...
17	4,500	...	...	...	...	...	...	...	...	...	...	...	...	17	4,500
5	845	...	...	...	...	1	700	...	...	...	...	2	840	6	1,740
3	600	...	...	...	...	1	300	...	...	...	...	2	190	6	1,090
7	1,580	...	...	...	...	...	...	...	...	...	...	2	550	9	2,130
5	1,170	...	...	...	...	...	...	...	...	...	...	3	450	8	1,620
10	2,350	...	...	...	...	...	...	...	...	...	...	4	850	14	3,200
8	1,470	...	...	...	...	...	...	...	...	...	...	1	500	9	1,970
6	1,776	...	...	...	...	...	...	...	...	...	...	1	150	7	1,926
6	2,165	...	...	...	...	...	...	...	...	...	...	1	50	7	2,415
2	600	...	...	...	...	...	...	...	...	...	...	1	150	3	750
7	937	...	...	...	...	...	...	...	...	...	...	2	500	9	1,437
3	185	...	...	...	...	...	...	...	...	...	...	2	210	5	395
9	1,640	...	...	...	...	...	...	...	...	...	...	3	740	12	2,380
6	1,517	...	...	...	...	...	...	...	...	...	...	4	540	10	2,057
2	320	...	...	...	...	...	...	...	...	...	...	3	285	5	605
6	1,585	...	...	...	...	...	...	...	...	...	...	3	385	9	1,970
5	1,060	...	...	...	...	...	...	...	...	...	...	4	1,000	9	2,060
4	1,020	...	...	...	...	...	...	...	...	...	...	3	400	7	1,420
10	1,976	...	...	...	...	...	...	...	...	...	...	6	1,270	16	3,246
16	2,696	...	...	...	...	...	...	...	...	...	...	5	750	21	3,646
9	1,290	...	...	...	...	...	...	...	...	...	...	10	1,700	19	2,990
4	790	...	...	...	...	...	...	...	...	...	...	3	950	7	1,740
7	2,697	...	...	...	...	...	...	...	...	...	...	6	1,225	13	3,922
4	877	...	...	...	...	...	...	...	...	...	...	1	150	5	1,027
7	4,009	...	...	...	...	...	...	...	...	...	...	4	600	11	4,609
10	4,615	...	...	...	...	...	...	...	...	...	...	1	150	11	4,765
15	8,164	...	...	...	...	...	...	...	...	...	...	3	950	18	9,114
22	9,506	...	...	...	...	...	...	...	...	...	...	...	...	22	9,506
10	3,841	...	...	...	...	...	...	...	...	...	...	6	900	23	6,131
17	5,234	...	...	...	...	...	...	...	...	...	...	1	150	33	7,347
32	7,197	...	...	...	...	...	...	...	...	...	...	1	150	29	11,164
28	11,014	...	...	...	...	...	...	...	...	...	...	3	450	57	15,018
53	15,092	...	...	...	...	...	...	1	76	...	...	3	450	49	5,101
16	4,651	...	...	...	...	...	...	...	...	...	...	3	450	16	3,299
13	2,849	...	...	...	...	...	...	...	...	...	...	...	...	...	...
for 1830-31 have not yet been received.						...	...	...	...	...	...	...	...	...	...

(continued)

(2)—Number of SHIPS and Amount of TONNAGE Cleared Outwards

continued)		27										29.							
TO ...		CEYLON.										ARABIAN and							
FLAGS		British.		French		Danish		Indian		TOTAL		British.		American		Danish		Dutch.	
YEARS		Ships	Tons	Ships	Tons.	Ships	Tons	Ships	Tons.	Ships	Tons	Ships	Tons	Ships	Tons.	Ships	Tons.	Ships	Tons.
1791-1	}	...	...	...	...	...	...	...	...	...	...	There are not any Returns of the External							
1791-5		...	...	...	...	...	...	...	...	...	...
1795-6		...	...	...	...	...	...	...	...	...	...
1796-7	...	...	...	...	...	...	...	...	...	...	...	1	300	...	...	...	...	...	...
1797-8	...	...	...	...	...	...	...	...	...	...	...	1	400	...	...	...	...	...	...
1798-9	...	...	...	...	...	...	...	...	...	...	...	1	400	...	...	...	...	...	...
1799-1800	...	...	...	...	...	...	...	...	...	...	...	1	50	...	...	...	...	...	...
1800-1	...	...	...	...	...	...	...	...	...	...	...	1	200	...	...	...	...	...	...
1801-2	...	...	...	...	...	...	...	...	...	...	...	3	905	...	...	...	...	...	...
1802-3	...	...	...	...	...	...	...	...	...	...	...	5	1,790	...	...	...	...	...	...
1803-4	...	...	...	...	...	...	...	...	...	...	...	1	350	...	...	...	...	...	...
1804-5	...	8	2,500	...	...	...	...	10	1,500	18	1,000	2	580	...	...	...	...	...	...
1805-6	...	19	6,160	...	...	...	...	8	1,650	27	7,810	7	2,160	...	...	...	...	...	...
1806-7	...	6	1,662	...	...	...	...	12	1,945	18	3,587	7	2,060	...	...	...	...	...	...
1807-8	...	12	3,181	...	...	...	...	7	1,050	19	1,231	5	1,460	...	...	...	...	...	...
1808-9	...	7	1,910	...	...	...	...	7	1,050	14	2,960	10	3,094	...	...	...	...	...	...
1809-10	...	7	1,796	...	...	...	...	7	1,050	14	2,846	6	2,157	...	...	...	...	...	...
1810-11	...	...	...	...	...	...	...	6	900	6	900	4	1,238	...	...	...	...	...	...
1811-12	...	6	1,714	...	...	...	...	7	1,050	13	2,764	5	1,424	...	...	...	...	...	...
1812-13	...	14	5,195	...	...	...	...	2	300	16	5,495	6	2,086	...	...	...	...	...	...
1813-14	...	12	3,614	...	...	...	...	4	600	16	4,244	8	2,823	...	...	...	...	...	...
1814-15	...	12	2,795	...	...	...	...	2	300	14	3,095	6	1,909	...	...	...	...	...	...
1815-16	...	9	2,254	...	...	...	...	7	1,050	16	3,304	8	3,154	...	...	...	...	...	...
1816-17	...	8	3,101	...	...	...	...	1	150	9	3,251	9	3,716	...	...	...	...	...	...
1817-18	...	8	1,674	...	...	...	...	1	150	9	1,824	13	5,075	...	...	...	...	...	...
1818-19	...	30	16,206	...	...	...	...	5	817	35	17,113	17	5,819	...	...	...	...	...	...
1819-20	...	6	1,803	...	...	...	...	2	300	8	2,103	16	6,785	...	...	...	...	...	...
1820-21	...	2	235	...	...	...	...	1	150	3	385	12	5,518	...	...	...	...	...	...
1821-22	...	2	508	1	575	...	...	2	300	5	1,383	15	6,748	...	...	...	...	...	...
1822-23	...	5	2,015	...	...	...	...	3	450	8	2,465	10	4,261	...	...	...	...	...	...
1823-24	...	7	2,787	...	...	...	...	2	300	9	3,087	5	1,733	...	...	1	150	...	...
1824-25	...	3	740	...	...	...	...	...	...	3	740	4	1,752	...	...	...	...	...	...
1825-26	...	2	260	...	...	...	...	4	600	6	860	7	2,938	...	...	...	...	...	...
1826-27	...	4	1,182	...	...	...	...	2	300	6	1,482	17	6,525	...	...	...	...	...	...
1827-28	...	2	493	...	...	...	...	2	300	4	793	9	3,958	...	...	...	...	...	...
1828-29	...	...	...	...	...	...	...	2	300	2	300	7	2,500	...	...	...	...	...	...
1829-30	...	1	159	...	...	...	...	...	...	1	159	7	2,444	...	...	...	...	...	...
1830-31	...	...	...	...	...	...	...	...	...	...	...	The Returns of the External Commerce of Bengal							

II.—FINANCE.—COMMERCIAL.

1081

from the Port of *Calcutta*, between 1793 and 1831—continued.

28.						29.						30.		31.	
PERSIAN GULFS.						MAIDIVE ISLANDS.						VARIOUS PLACES.		GRAND TOTAL	
Portuguese.		Indian.		TOTAL.		British.		Indian.		TOTAL.		Ships.		Tons.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Commerce of Bengal for these Years						...	...	...	...	...	...	...	...	...	...
...	...	9	3,273	12	4,375	...	...	19	1,343	19	1,343	...	...	184	67,783
...	...	17	6,075	18	6,075	...	...	21	1,400	21	1,400	...	...	172	50,416
...	...	11	4,550	12	4,950	...	...	8	480	8	480	...	...	146	57,024
...	...	10	4,150	11	4,550	...	...	11	1,510	11	1,540	...	...	112	42,168
...	...	9	3,750	10	3,800	...	...	17	2,550	17	2,550	...	...	149	56,582
...	...	7	3,400	8	3,600	...	...	33	4,950	33	4,950	...	...	162	52,132
...	...	11	5,350	14	6,345	...	...	23	3,450	23	3,450	...	...	185	61,204
...	...	8	4,100	13	5,090	...	...	25	3,750	25	3,750	...	...	192	68,604
...	...	12	6,420	13	6,770	...	...	25	3,750	25	3,750	...	...	192	63,806
...	...	11	5,870	13	6,439	...	...	20	3,250	20	3,250	...	...	179	66,473
...	...	28	11,993	35	14,153	1	400	12	1,800	13	2,200	...	...	229	82,079
...	...	22	9,880	29	11,940	1	225	22	3,300	23	3,525	...	...	241	89,750
...	...	22	9,825	28	11,535	2	900	20	3,900	28	4,800	...	...	206	74,170
...	...	7	2,950	17	6,044	...	...	25	3,750	25	3,750	...	...	154	51,034
...	...	20	10,910	32	13,067	1	400	18	2,700	19	3,100	...	...	188	73,165
...	...	8	3,000	12	4,238	...	...	25	3,750	25	3,750	...	...	181	54,797
...	...	14	6,550	19	7,974	1	450	24	3,600	25	4,050	...	...	226	83,473
...	...	18	8,025	24	10,111	...	...	24	3,600	24	3,600	...	...	231	85,612
...	...	14	6,400	22	9,223	5	1,800	29	4,350	34	6,150	...	...	255	93,335
...	...	14	5,375	20	7,374	1	250	32	4,800	34	5,050	...	...	243	86,520
...	...	13	4,950	21	8,104	2	700	28	4,200	30	4,900	...	...	299	102,130
...	...	15	5,428	24	9,144	2	700	23	3,450	25	4,150	...	...	340	129,697
...	...	16	6,553	29	11,628	2	841	31	4,650	33	5,494	...	...	397	155,111
...	...	22	8,769	39	14,588	1	100	16	2,400	17	2,500	...	...	415	164,047
...	...	16	7,045	32	13,830	1	500	16	2,400	17	2,900	...	...	323	121,397
...	...	18	8,248	30	13,766	...	...	21	3,150	21	3,150	...	...	274	94,617
...	...	18	7,961	33	14,709	...	...	27	4,153	27	4,153	...	...	290	117,490
...	...	10	4,117	20	8,374	1	203	33	4,950	34	5,153	...	...	391	122,035
...	...	9	4,385	15	6,268	...	...	27	4,950	27	4,950	...	...	225	89,597
...	...	7	3,475	11	5,227	...	...	20	3,000	20	3,000	...	...	191	79,044
...	...	10	3,641	17	6,579	1	203	9	1,350	10	1,553	...	...	251	95,429
...	...	8	3,273	25	9,798	...	...	14	2,100	14	2,100	...	...	256	101,060
...	...	14	6,259	23	10,217	...	...	16	2,400	16	2,400	...	...	313	116,160
...	...	11	4,803	18	7,393	...	...	11	1,650	11	1,650	...	...	278	109,376
...	...	11	5,033	18	7,527	...	...	11	1,650	11	1,650	...	...	242	90,390
for 1830-31 have not yet been received.						...	...	...	...	...	...	...	...	...	...

THOMAS FISHER,
Searcher of the Records

(3) A RETURN of the Number of SHIPS and the Amount of TONNAGE which have Entered Inwards, Countries beyond the Territories of the Three Presidencies; distinguishing the Countries

FROM ...		1. UNITED KINGDOM.						2. FRANCE.					
PLACES		British.		American.		TOTAL		French		British and American.		TOTAL	
YEARS		Ships	Tons.	Ships	Tons	£ s d	Tons	Ships	Tons.	Ships	Tons.	Ships	Tons.
1793	...	}	...	...	...	...	...	...	...	There are not any Returns of the			
1794	...												
1795	...												
1796	...												
1797	...												
1798	...												
1799	...												
1800	...												
1801	...												
1802*	...	25	19,061	...	...	25	19,061	1	258	...	...	1	258
1803	...	22	17,186	...	...	22	17,186	1	600	...	...	1	600
1804	...	21	16,130	...	...	21	16,130	...	...	...	...	...	...
1805	...	28	21,707	1	341	29	25,048	...	...	...	...	...	...
1806	...	31	21,679	...	...	31	21,679	...	...	1	294	1	294
1807	...	22	19,653	...	...	22	19,653	...	...	...	...	...	...
1808	...	20	22,973	...	...	20	22,973	...	...	...	...	...	...
1809	...	20	15,658	...	...	20	15,658	...	...	...	...	...	...
1810	...	26	17,625	...	...	26	17,625	...	...	...	...	...	...
1811-12	...	19	15,381	...	...	19	15,381	...	...	...	...	...	...
1812-13	...	16	13,234	...	...	16	13,234	...	...	...	...	...	...
1813-14	...	20	17,489	...	...	20	17,489	...	...	...	...	...	...
1814-15	...	18	15,180	...	...	18	15,180	...	...	...	...	...	...
1815-16	...	26	20,120	...	...	26	20,120	...	...	...	...	...	...
1816-17	...	11	26,517	...	...	11	26,517	...	...	...	...	...	...
1817-18	...	40	26,667	...	...	40	26,667	2	722	...	...	2	722
1818-19	...	39	22,635	...	...	39	22,635	1	367	...	...	1	367
1819-20	...	27	16,011	...	...	27	16,011	...	...	...	...	...	...
1820-21	...	32	18,370	...	...	32	18,370	1	238	...	...	1	238
1821-22	...	33	18,731	...	...	33	18,731	1	311	...	...	1	311
1822-23	...	31	21,168	...	...	31	21,168	3	788	...	...	3	788
1823-24	...	31	18,496	...	...	31	18,496	1	222	...	...	1	222
1824-25	...	34	22,562	...	...	34	22,562	5	1,382	1	200	6	1,582
1825-26	...	38	21,325	...	...	38	21,325	4	1,023	...	...	4	1,023
1826-27	...	36	21,553	...	...	36	21,553	8	1,778	...	...	8	1,778
1827-28	...	39	21,427	...	...	39	21,427	9	2,283	...	...	9	2,283
1828-29	...	40	23,873	...	...	40	23,873	16	3,965	1	261	17	4,226
1829-30	...	31	18,791	...	...	31	18,791	19	5,925	...	...	19	5,925
1830-31	...	...	...	...	...	...	...	The Returns of the External Commerce of Port St. George					

* The Returns of the Years 1802 to 1804 exhibit the Ships and Tonnage of the Port of Port St. George only; no Returns having been received.
 * There are no Statements of Vessels and Tonnage entered Inwards from the subordinate Ports in the first four Months of 1811, but the

between the Years 1793 and 1831, at the PORT of *Fort St George* and the Ports subordinate thereto, from from whence the Vessels came, and stating the Flag under which they sailed.

3.						4.		5.		6.		7.		8.	
AMERICA.						HAMBURGH		ANTWERP and LEGHORN.		COPENHAGEN.		SPAIN		GIBRALTAR.	
American		British		TOTAL		Hamburgh		American		Danish		Spanish		British	
<i>Ships</i>	<i>Tons</i>	<i>Ships</i>	<i>Tons</i>	<i>Ships</i>	<i>Tons</i>	<i>Ships</i>	<i>Tons</i>	<i>Ships</i>	<i>Tons</i>	<i>Ships</i>	<i>Tons</i>	<i>Ships</i>	<i>Tons</i>	<i>Ships</i>	<i>Tons</i>
External Commerce of Fort St. George for these Years.										...	...	...	...	...	...
2	324	...	...	2	324	1	496	1	245	2	950	...	...	...	...
5	1,402	...	...	5	1,402	...	...	...	...	1	347	1	500	...	...
11	2,997	...	...	11	2,997	1	202	...	...	3	2,000	...	...	...	...
10	4,281	...	...	10	4,281	...	...	1	330	1	240	...	...	...	...
10	2,972	...	...	10	2,972	...	...	1	297	1	500	...	...	...	...
11	4,325	...	...	11	4,325	...	...	1	331	...	...	...	...	...	...
3	618	...	...	3	618	...	...	...	...	...	...	...	...	...	...
2	374	...	...	2	374	...	...	...	...	...	...	...	...	...	...
8	1,820	...	...	8	1,820	...	...	...	...	...	...	...	...	...	...
5	1,051	...	...	5	1,051	...	...	...	...	...	...	...	...	...	...
1	374	...	...	1	374	...	...	...	...	...	...	...	...	...	...
...
...
1	90	...	...	1	90	...	...	...	...	...	...	...	...	...	...
6	2,381	...	...	6	2,381	...	...	...	...	...	...	...	...	...	...
2	958	...	...	2	958	...	...	...	...	1	300	...	...	...	...
6	1,911	1	135	7	2,046	...	...	...	...	1	670	...	...	...	...
1	336	...	...	1	336	...	...	...	...	1	486	...	...	...	...
2	656	...	...	2	656	...	...	...	...	...	...	...	...	...	...
3	730	...	...	3	730	...	...	...	...	...	...	...	...	...	...
3	855	...	...	3	855	...	...	...	...	2	918	...	...	...	...
...	...	...	...	...	...	...	...	...	...	1	353	...	...	...	...
1	99	...	...	1	99	...	...	...	...	...	...	...	...	...	...
1	78	...	...	1	478	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	155
1	331	...	...	1	331	...	...	...	...	...	...	...	...	...	...
1	279	...	...	1	279	...	...	...	...	...	...	...	...	...	...
2	627	...	...	2	627	...	...	...	...	...	...	...	...	...	...
for the year 1830-31 have not yet been received.										...	...	...	...	...	...

from the Ports subordinate to that Presidency during those years.
Tonnage inward for the Port of *Fort St. George* for that period is included in the Statement of 1811 12.

THOMAS FISHER, Searcher of the Records

(continued

(3)—RETURN of the Number of SHIPS and Amount of TONNAGE Entered Inwards

(continued)		9.				10.				11.				12.							
FROM ...		PORTUGAL.				BRAZILS.				SOUTH AMERICA.		CHINA.									
FLAGS.		Portuguese.		British and American		TOTAL.		Portuguese.		British and Spanish		British		Portuguese and Danish		Arab and Indian		TOTAL			
YEARS		Ships	Tons.	Ships	Tons	Ships	Tons.	Ships	Tons	Ships	Tons	Ships	Tons.	Ships	Tons.	Ships	Tons	Ships	Tons.		
1793	}																				
1794																					
1795																					
1796																					
1797		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1798																					
1799																					
1800	}																				
1801																					
1802*		1	650	...	...	1	650	...	...	...	...	1	2,243	...	...	...	...	1	2,243
1803		4	1,110	...	...	4	1,110	...	...	...	...	1	600	...	...	...	...	1	600
1804		4	2,000	...	...	4	2,000	...	...	...	...	5	3,300	...	...	...	...	5	3,300
1805		...	...	1	220	1	220	...	...	...	...	2	1,550	...	...	...	...	2	1,550
1806		5	2,500	...	...	5	2,500	...	...	...	...	2	930	...	...	...	...	2	930
1807		1	250	1	373	2	623	...	...	...	...	9	4,835	...	...	...	...	9	4,835
1808		...	...	...	...	...	...	...	...	...	...	3	2,461	...	...	...	...	3	2,461
1809		...	...	...	...	...	...	...	...	...	...	3	1,950	...	...	4	788	7	2,738
1810		1	500	...	...	1	500	...	...	...	...	2	1,112	...	...	1	75	3	1,187
1811-12		...	...	...	...	...	...	1	400	...	...	3	1,120	...	...	1	800	4	1,920
1812-13		2	950	...	...	2	950	2	590	...	...	1	260	...	...	...	...	1	260
1813-14		2	1,190	1	736	3	1,926	...	...	...	...	1	375	...	...	...	...	1	375
1814-15		2	700	...	...	2	700	1	180	...	...	2	725	...	...	...	...	2	725
1815-16		1	1,370	...	...	1	1,370	...	...	...	...	1	312	...	...	...	...	1	312
1816-17		3	1,560	...	...	3	1,560	...	...	...	...	...	...	...	...	...	...	...	...
1817-18		1	250	...	...	1	250	...	...	...	...	4	2,101	...	...	...	...	4	2,101
1818-19		1	800	...	...	1	800	...	...	...	...	2	848	...	...	...	...	2	848
1819-20		1	300	...	...	1	300	...	...	...	...	...	...	...	...	...	...	...	...
1820-21		1	600	...	...	1	600	...	...	...	...	3	1,534	...	...	...	...	3	1,534
1821-22		...	...	...	...	...	...	...	...	...	...	3	1,782	...	...	...	...	3	1,782
1822-23		...	...	...	...	...	...	...	...	...	...	1	597	...	...	...	...	1	597
1823-24		...	...	...	...	...	...	...	...	...	...	2	1,074	1	100	...	...	3	1,174
1824-25		...	...	...	...	...	...	...	...	...	...	12	4,714	2	650	...	...	14	5,364
1825-26		...	...	...	...	...	...	...	...	...	...	3	2,171	3	670	...	...	6	2,841
1826-27		...	...	...	...	...	...	...	...	...	...	7	4,025	4	1,062	...	...	11	5,087
1827-28		...	...	...	...	...	...	...	...	...	...	7	4,782	3	560	...	...	10	5,342
1828-29		...	...	...	...	...	...	...	...	...	...	6	4,470	1	340	...	...	7	4,810
1829-30		...	...	...	...	...	...	...	...	...	...	7	4,928	2	520	...	...	9	5,448
1830-31		...	...	...	...	...	...	...	...	...	...

The Returns of the External Commerce of Fort St. George

The Returns of the External Commerce of Fort St. George

* The Returns of the Years 1802 to 1806 exhibit the Ships and Tonnage of the Port of Fort St. George only; no Returns having been received
† There are no Statements of Vessels and Tonnage entered Inwards from the subordinate Ports in the first four Months of 1811, but the

II.—FINANCE.—COMMERCIAL.

1085

between the Years 1793 and 1831, at the Port of *Fort St. George*—continued.

13.										14.	
MAURITIUS and BOURBON										MADEIRA.	
British.		French.		Portuguese and Danish.		Arab and Indian.		TOTAL		American and Portuguese.	
Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.	Ships	Tons.
External Commerce of Fort St. George for these Years											
3	410	4	460	..	..	..	..	7	870	..	..
5	1,240	5	4,186	1	Danish. 300	..	..	11	2,726	..	..
..
..	..	..	..	4	1,158	..	..	4	1,458	..	..
..	..	..	..	2	300	..	..	2	300	American 2	669
..
..
..
1	250	..	..	..	..	..	..	1	250	..	..
48	7,553	..	..	..	..	1	450	19	8,003	..	..
31	7,122	..	..	..	..	..	..	31	7,122	..	..
26	6,519	..	..	..	..	..	..	26	6,519	..	..
13	3,337	..	..	..	..	..	..	13	3,337	Portuguese 1	500
33	7,666	..	..	..	..	..	..	33	7,666	..	..
28	7,709	..	..	..	..	..	..	28	7,709	American 1	297
20	3,808	..	..	..	..	..	..	20	3,808	..	..
9	1,817	..	..	..	..	..	..	9	1,817	..	..
19	2,924	..	..	..	..	..	..	19	2,924	..	..
13	2,184	..	..	..	..	..	..	13	2,184	..	..
13	2,592	1	170	..	..	1	130	15	2,892	..	..
13	3,985	2	310	..	..	..	..	15	4,325	..	..
23	4,174	3	650	1	Portuguese. 90	..	..	27	4,914	..	..
11	1,856	7	1,610	..	..	..	..	18	3,466	..	..
6	1,058	3	663	..	..	..	..	9	1,721	..	..
5	840	6	810	..	..	..	..	11	1,650	..	..
4	452	3	648	..	..	..	..	7	1,100	..	..
7	2,663	1	134	..	..	..	..	8	2,797	..	..
9	2,656	8	912	..	..	1	200	13	3,768	..	..
for the year 1830-31 have not yet been received.											

from the Ports subordinate to that Presidency during those years.
Tonnage inward for the Port of Fort St. George for that period is included in the Statement of 1811-12

(3)—RETURN of the Number of SHIPS and Amount of TONNAGE Entered Inwards

continued)		15.										16.	
FROM ...		MANILLA.										NEW SOUTH WALES.	
FLAGS		British.		French, Spanish, and Portuguese		Hamburgh and Danish		Arab and Indian		TOTAL.		British.	
YEARS		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793	}	...	...	...	...	...	...	...	...	There are not any Returns of the			
1794		...	...	...	...	...	...	...	...
1795		...	...	...	...	...	...	...	...
1796		...	...	...	...	...	...	...	...
1797		...	...	...	...	...	...	...	...
1798		...	...	...	...	...	...	...	...
1799		...	...	...	...	...	...	...	...
1800		...	...	...	...	...	...	...	...
1801		...	...	...	...	...	...	...	...
1802		2	470	...	...	1	300	...	...	3	770	...	...
1803		1	300	1	200	1	280	...	...	3	780	1	180
1804		2	300	...	...	...	...	...	...	2	300	...	...
1805		...	...	1	230	2	770	...	...	3	1,000	...	...
1806		...	...	...	...	...	...	...	...	...	...	...	...
1807		...	...	...	...	...	...	...	...	...	...	...	...
1808		...	...	...	...	...	...	...	...	...	...	...	...
1809		...	...	...	...	...	...	...	...	...	...	...	...
1810		3	400	1	380	...	...	...	...	4	780	...	...
1811		1	180	2	450	...	...	...	...	3	630	1	522
1812		1	300	...	...	...	...	...	...	1	300	...	...
1813		1	270	...	...	...	...	...	...	1	270	...	...
1814-15		...	...	...	...	...	...	...	...	...	...	...	...
1815-16		1	140	1	120	...	...	...	...	2	260	...	...
1816		1	270	...	...	...	...	...	...	1	270	...	...
1817-18		2	360	...	...	...	...	...	...	2	360	...	...
1818-19		...	475	...	...	...	...	...	...	2	475	...	...
1819-20		1	83	...	...	...	...	...	...	1	83	...	...
1820-21		1	205	...	...	...	...	...	...	1	205	...	...
1821-22		1	278	...	...	...	...	...	...	1	278	...	...
1822-23		2	691	...	...	...	...	...	...	2	691	...	...
1823-24		1	45	...	...	...	...	...	...	1	45	1	167
1824-25		2	315	...	...	...	...	...	...	2	315	...	...
1825-26		1	100	...	...	...	...	...	...	1	100	2	925
1826-27		...	...	1	220	...	...	...	...	1	220	...	...
1827-28		1	57	...	...	...	...	...	...	1	57	...	...
1828-29		...	...	...	...	...	...	...	...	...	...	1	536
1829-30		...	...	1	250	...	...	...	...	1	250	1	452
1830-31		...	...	...	...	...	...	...	...	...	...	...	...

The Returns of the External Commerce of Port St. George

* The Returns of the Years 1802 to 1806 exhibit the Ships and Tonnage of the Port of Port St. George only: no Returns having been received
† There are no Statements of Vessels and Tonnage entered Inwards from the subordinate Ports in the first four Months of 1811, but the

between the Years 1793 and 1831, at the Port of *Fort St. George, &c.* —*continued.*

17.						18				19.							
CAPE OF GOOD HOPE.						COAST OF AFRICA				JAVA AND MOIUCAS.							
British.		American and Danish.		TOTAL.		British and Danish.		British.		Dutch and Danish.		American, French, and Portuguese.		Arab and Indian.		TOTAL.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
External Commerce of Fort St. George for these Years.																	
2	1,105	...	...	2	1,105	...	...	5	1,770	...	...	...	...	...	...	5	1,770
2	728	...	...	2	728	...	...	9	2,744	1	Dutch 280	...	...	1	280	11	3,304
...	...	American 1	137	1	137	1	600	1	150	1	Danish 320	1	American 269	1	250	4	989
...	...	1	310	1	310	2	320	...	...	1	380	1	262	...	...	2	642
1	336	...	...	1	336	1	90	...	...	1	380	...	...	...	...	1	380
8	3,027	...	...	8	3,027	...	...	...	...	...	...	1	Portuguese 550	...	...	1	550
2	530	...	...	2	530	...	...	...	...	...	...	...	...	...	...	...	...
...
2	600	...	...	2	600	...	...	...	...	...	...	...	...	...	...	...	...
2	1,104	...	...	2	1,104	...	...	17	3,855	...	...	...	...	...	...	17	3,855
1	300	...	...	1	300	...	...	18	5,156	...	...	...	...	1	400	19	5,556
1	300	...	...	1	300	...	...	9	2,857	...	...	...	...	...	...	9	2,857
3	1,060	...	...	3	1,060	1	50	4	1,421	...	...	...	...	...	...	4	1,421
3	718	...	...	3	718	...	...	...	...	...	...	...	...	...	...	...	...
1	137	...	...	1	137	...	...	2	915	...	...	...	...	...	...	2	915
...	...	...	...	...	...	...	...	2	310	...	...	...	...	...	...	2	340
...	...	...	...	...	...	...	...	2	419	...	...	...	...	...	...	2	419
2	1,080	...	...	2	1,080	1	60	2	701	...	...	...	...	...	...	2	701
...	...	...	...	...	...	...	...	3	1,055	...	...	...	...	...	...	3	1,055
3	1,257	...	...	3	1,257	...	...	5	1,627	...	...	...	...	...	...	5	1,627
3	1,272	...	...	3	1,272	...	...	6	2,702	...	...	...	...	...	...	6	2,702
3	945	...	...	3	945	...	...	8	2,701	...	...	...	...	...	...	8	2,701
4	1,119	...	...	4	1,119	...	...	1	480	1	Dutch 149	...	...	...	...	2	629
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	600	2	600
1	345	...	...	1	345	...	...	1	294	1	130	...	...	...	...	2	424
...	...	...	...	...	...	...	...	1	329	1	120	...	...	...	...	2	449
...	...	...	...	...	...	...	...	...	...	1	238	...	...	...	...	1	238
...	...	...	...	...	...	...	...	1	175	1	120	...	...	...	...	2	295
for the year 1830-31 have not yet been received.																	

from the Ports subordinate to that Presidency during those years.
Tonnage Inward for the Port of Fort St. George for that period is included in the Statement of 1811-12.

THOMAS FISHER, Searcher of the Records.

(continued.)

(3).—RETURN of the Number of SHIPS and Amount of TONNAGE Entered Inwards

continued)

20

21

FROM ...		SUMATRA.										PENANG and EASTWARD.									
FLAG		British.		Dutch.		French.		Arab and Indian.		TOTAL		British		French, American, Danish, and Spanish.		Portuguese.		Dutch and Hamburg.		Arab, Indian, and Turkish	
YEARS		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793	}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1794		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1795		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1796		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1797		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1798		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1799	}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1800		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1801		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1802		2	350	...	...	...	...	...	...	2	350	5	1,440	...	...	...	...	...	...	1	340
1803		4	1,500	...	...	...	...	1	200	5	1,700	6	2,303	...	...	...	...	...	...	...	...
1804		1	45	...	...	...	...	...	...	1	45	12	3,013	...	...	...	...	...	...	1	200
1805	...	1	200	...	...	...	...	...	...	1	200	13	2,115	2	571	...	...	...	...	2	650
1806	...	...	...	...	...	...	...	1	100	1	100	11	2,003	1	304	...	...	...	...	1	100
1807	...	2	375	...	...	...	...	...	...	2	375	10	3,499	1	272	...	...	...	...	31	1,819
1808	...	2	150	...	...	...	...	1	300	3	450	17	4,560	1	75	...	...	...	...	39	5,224
1809	...	5	335	...	...	...	...	1	130	6	465	16	3,878	...	...	...	...	...	...	52	8,544
1810†	...	2	950	...	...	...	...	2	470	4	1,420	14	3,521	...	...	...	...	...	...	62	9,572
1811-12	...	...	...	...	...	...	...	...	...	...	...	14	1,730	...	...	2	450	...	...	65	8,985
1812-13	...	...	...	...	...	...	...	...	...	...	...	51	5,800	...	...	3	430	...	...	59	8,211
1813-14	...	...	...	...	...	...	...	...	...	...	...	29	5,210	...	...	...	...	...	...	40	6,193
1814-15	...	...	...	...	...	...	...	...	...	...	...	60	6,956	...	...	1	300	...	...	24	2,743
1815-16	...	...	...	...	...	...	...	...	...	...	...	50	6,141	...	...	...	...	...	...	43	6,162
1816-17	...	...	...	...	...	...	...	...	...	...	...	59	7,007	...	...	1	300	...	...	37	3,818
1817-18	...	...	...	...	...	...	...	...	...	...	...	117	13,191	...	...	2	110	...	...	32	5,059
1818-19	...	...	...	...	...	...	...	...	...	...	...	91	13,625	...	...	...	...	...	...	27	4,125
1819-20	...	...	...	...	...	...	...	...	...	...	...	116	13,813	...	...	2	500	...	...	28	4,216
1820-21	...	...	...	...	...	...	...	...	...	...	...	97	10,921	1	162	2	450	...	...	15	3,447
1821-22	...	...	...	...	...	...	...	...	...	...	...	71	14,121	...	...	2	618	5	465	3	900
1822-23	...	...	...	...	...	...	...	...	...	...	...	113	17,691	...	...	4	1,240	...	...	8	1,780
1823-24	...	...	...	...	...	...	...	...	...	...	...	61	9,109	...	...	...	...	1	85	7	1,070
1824-25	...	5	1,240	...	149	...	...	...	...	9	1,389	34	4,214	...	...	...	...	...	...	3	670
1825-26	...	3	455	4	427	...	...	...	...	7	882	37	5,801	...	...	...	...	2	570	2	400
1826-27	...	4	507	4	441	...	...	...	...	8	948	54	6,806	...	...	...	...	3	343	3	966
1827-28	...	10	1,675	6	545	1	238	1	200	18	2,658	40	6,314	...	...	...	...	1	119	5	880
1828-29	...	5	808	4	546	1	154	1	166	11	1,654	38	6,572	...	...	...	...	1	120	11	2,485
1829-30	...	4	859	2	344	...	...	...	...	6	1,203	45	7,227	...	...	...	...	1	392	11	2,860
1830-31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

The Returns of the External Commerce of Fort St. George

The Returns of the External Commerce of Fort St. George

* The Returns of the Years 1802 to 1806 exhibit the Ships and Tonnage of the Port of Fort St. George only; no Returns having been received
† There are no Statements of Vessels and Tonnage entered Inwards from the subordinate Ports in the first four Months of 1811; but the

between the Years 1793 and 1831 at the Port of Fort St. George, &c.—continued.

22										23.									
PEGUE.										CRYLON.									
TOTAL		British		Danish and French.		Arab and Indian.		TOTAL		British		French, Portuguese, Dutch, and Danish.		Arab and Indian.		TOTAL			
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
External Commerce of Fort St. George for these Years																			
6	1,730	6	1,017	1	231	9	2,721	16	4,022	...	...	...	...	...	...	...	...	...	...
6	2,493	12	5,030	...	...	13	3,070	25	9,300	...	...	...	...	...	...	...	...	...	...
13	3,213	8	2,397	...	...	15	3,030	23	6,580	...	...	...	...	...	...	...	...	...	...
17	3,330	3	827	...	...	9	1,305	12	2,602	15	3,452	1	10	108	6,190	141	9,982	...	...
13	2,197	8	2,710	...	...	8	2,190	16	5,200	11	6,861	...	...	88	4,883	132	11,544	...	...
51	8,500	8	1,937	...	...	11	2,952	19	1,880	506	18,056	...	...	325	11,820	811	32,176	...	...
57	9,859	11	3,515	...	...	6	2,930	17	6,113	631	22,423	2	255	480	16,513	1,116	39,221	...	...
68	12,122	5	1,100	...	...	33	6,191	33	7,637	630	20,019	...	...	146	10,558	1,076	36,607	...	...
76	13,000	2	530	...	...	11	1,779	13	2,130	492	16,192	...	...	295	11,816	787	31,308	...	...
111	13,105	5	330	...	...	31	3,705	30	9,041	117	15,291	...	...	319	11,682	766	26,976	...	...
113	14,311	2	385	...	...	6	1,200	8	1,315	513	22,195	...	...	214	8,116	727	30,611	...	...
69	11,403	10	3,015	...	...	5	1,180	15	1,195	680	21,619	...	...	216	8,620	902	33,239	...	...
85	9,999	15	2,370	...	...	1	1,250	19	3,626	622	22,856	...	...	305	12,516	927	33,372	...	...
90	12,603	7	985	...	...	13	3,190	20	4,175	603	20,300	...	...	378	22,007	983	12,307	...	...
97	11,125	7	1,065	...	...	8	1,820	15	2,333	372	15,217	...	...	331	11,323	701	26,530	...	...
151	18,693	5	1,542	...	...	4	720	9	2,662	107	16,797	...	...	371	11,983	838	28,781	...	...
118	17,750	5	1,695	...	...	7	1,710	12	3,105	860	15,752	1	700	356	10,915	751	27,397	...	...
146	18,559	6	2,104	...	...	5	1,235	11	3,339	121	15,071	...	...	338	9,866	762	24,937	...	...
115	14,980	10	3,948	...	...	11	2,635	21	6,333	166	15,939	...	...	339	9,922	805	25,861	...	...
81	16,404	8	3,559	...	...	5	610	13	4,199	570	21,004	...	...	251	7,422	824	28,446	...	...
125	20,711	6	3,380	...	...	3	480	9	3,800	196	17,581	1	250	291	8,126	788	26,957	...	...
72	10,354	5	1,916	...	...	7	1,330	12	3,246	509	21,799	...	...	359	9,945	828	31,743	...	...
37	4,884	29	13,813	French.	150	3	703	33	14,666	479	15,317	1	200	263	8,860	743	24,377	...	...
41	6,771	33	16,142	Danish.	500	11	2,150	15	18,792	593	18,112	1	208	288	10,236	882	28,536	...	...
60	8,095	39	18,694	...	...	13	2,165	52	21,159	612	18,803	...	...	231	8,814	843	27,617	...	...
49	8,556	25	7,705	...	...	9	1,500	34	9,205	606	19,682	...	...	261	9,799	867	29,481	...	...
51	9,627	15	4,481	...	...	4	460	19	4,041	735	20,704	1	8	338	11,207	1,071	31,919	...	...
57	9,979	15	3,083	...	...	11	1,550	26	4,633	664	20,132	...	...	487	15,888	1,151	36,028	...	...
for the years 1830-31 have not yet been received.																			

from the Ports subordinate to that Presidency during those years.

Tonnage inward for the Port of Fort St. George for that period is included in the Statement of 1811 12.

THOS. FISHER, Searcher of the Records.

(continued.)

1090 APPENDIX TO REPORT FROM SELECT COMMITTEE.

(3.)—RETURN of the Number of SHIPS and Amount of TONNAGE Entered Inwards

FROM ...		24. ARABIAN and PERSIAN GULFS								25. MALDIVES.							
YEARS	FLAGS.	British.		Portuguese and Dutch		Arab, Indian, and Turkish		TOTAL		British		Arab and Indian.		TOTAL.		TOTAL, exclusive of Foreign Settlements on the Continent of India.	
		Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1793	}	There are not any Returns of the			
1794		...	...	...	...	...	...	...	...	...	...	...	...
1795		...	...	...	...	...	...	...	...	...	...	...	...
1796		...	...	...	...	...	...	...	...	...	...	...	...
1797		...	...	...	...	...	...	...	...	...	...	...	...
1798		...	...	...	...	...	...	...	...	...	...	...	...
1799		...	...	...	...	...	...	...	...	...	...	...	...
1800		...	...	...	...	...	...	...	...	...	...	...	...
1801		...	...	...	...	...	...	...	...	...	...	...	...
1802	...	7	2,205	...	...	...	...	7	2,205	...	...	...	...	...	...	87	37,862
1803	...	3	750	...	...	1	680	4	1,430	...	...	...	...	...	...	103	44,622
1804	1	300	1	300	...	...	...	...	...	...	93	39,367
1805	236	51,612
1806	2	500	2	500	...	...	...	...	...	...	224	51,008
1807	...	10	2,040	...	...	70	8,895	80	10,935	...	...	45	2,103	45	2,103	1,082	92,712
1808	...	4	1,428	...	...	80	13,303	91	14,731	2	72	56	2,675	58	2,747	1,379	100,215
1809	...	13	3,375	...	...	106	20,174	109	23,549	1	32	14	2,865	45	2,897	1,472	107,998
1810	...	12	3,021	...	...	125	15,100	137	18,121	2	23	70	3,471	81	3,494	1,444	93,381
1811	2	510	2	510	2	200	27	1,918	29	2,118	1,046	84,940
1812	2	460	2	460	...	200	6	200	11	586	935	76,275
1813	8	3,250	8	3,250	...	...	5	159	5	159	1,061	82,282
1814	...	1	404	...	...	1	1,700	5	2,104	...	...	1	100	1	100	1,082	74,354
1815	...	1	300	...	...	3	1,060	1	1,360	...	...	4	165	4	165	1,180	91,736
1816	...	3	1,296	...	...	1	165	4	1,461	...	...	10	790	10	790	912	82,617
1817	...	2	750	...	...	2	709	1	1,511	...	...	6	315	6	345	1,082	87,135
1818	...	4	1,688	...	...	1	550	5	2,238	...	...	1	50	1	50	958	80,917
1819	...	5	2,546	...	...	1	750	6	2,996	...	...	2	60	2	60	982	71,872
1820	...	2	799	...	...	1	600	3	1,399	...	...	1	50	1	50	1,004	73,715
1821	...	7	2,519	...	...	2	950	9	3,469	...	...	2	80	2	80	1,005	80,401
1822	...	10	3,612	...	...	3	1,545	13	5,157	...	...	...	...	...	...	1,001	88,984
1823	23	4,761	35	7,866	13	477	3	109	16	586	1,139	82,813
1824	19	4,245	26	6,474	6	255	1	50	7	305	936	87,231
1825	38	7,087	44	7,184	25	418	2	71	27	489	1,109	94,987
1826	23	4,375	35	7,795	5	396	5	191	10	587	1,079	97,343
1827	54	8,339	75	13,223	48	823	...	...	48	823	1,160	94,937
1828	28	5,288	43	9,017	...	...	...	...	...	...	...	...
1829	28	5,288	43	9,017	...	...	...	...	...	...	...	...
1830	...	5	352	...	...	3	...	38	5,375	...	...	4	...	96	1,936	1,452	94,702
1831	The Returns of the External Commerce of Port St. George							

* The Returns of the Years 1800 to 1809 exhibit the Ships and Tonnage of the Port of Port St. George only: no Returns having been received
 † There are no Statements of Vessels and Tonnage entered inwards from the subordinate Ports in the first four Months of 1811; but the

